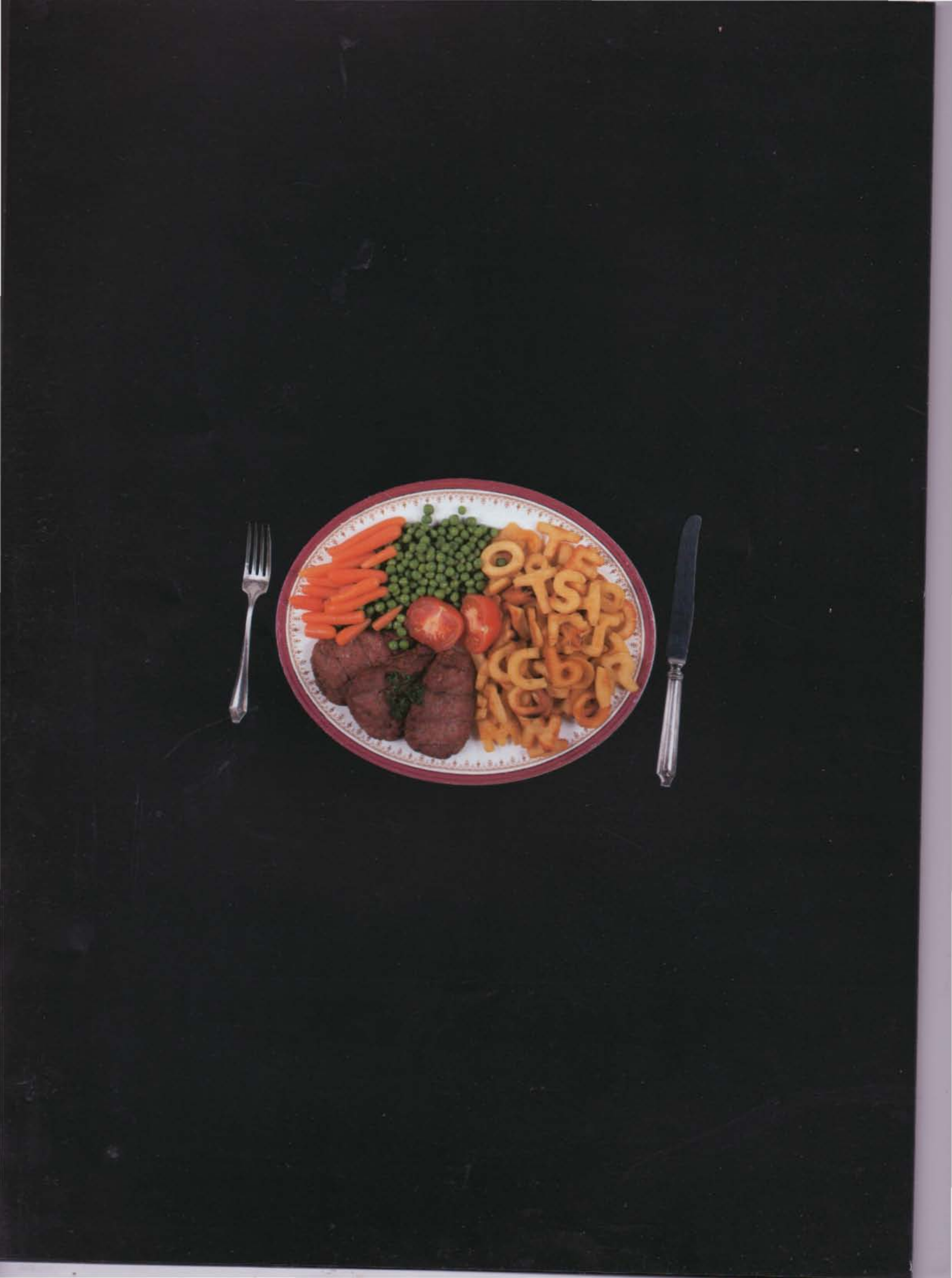

The future of interactive entertainment
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EDGE
PlayStation ■ Saturn ■ Nintendo 64 ■ PC ■ M2 ■ A
imedia
Inside:
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Lobotomy Software
La nouvelle vague!
Edge surfs the new wave of French videogame development
Inside issue 44: Edge jets to France and Belgium in search of new advances in the field of realtime PC 3D (cover image from the forthcoming Dark Earth by Bordeaux-based Kalisto). Plus, Seattle codeshops Boss, Zombie and Lobotomy unveil their latest 32bit and 64bit titles...
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March should have been Nintendo's month in the UK. Publicity regarding the launch of the N64 had been bubbling away nicely for weeks and was more than ready to boil over by the time the first of the month arrived. But then the PlayStation price drop was announced, and suddenly Nintendo was fighting a very different battle.

Why £129? Why March? The obvious explanation is that Sony is running scared. Nintendo's superconsole is clearly a more powerful machine, and that knowledge has been seeping into the public consciousness for almost a year.

But there is also a tremendous sense of defiance in the move. The PlayStation has a huge installed user base, and Sony is aware that the console would be unlikely to retain such healthy sales if it were to stay at the same price. Dropping £70, however, makes the machine attractive to a whole new market.

The company also knows that at £250 the N64 is extravagantly expensive by comparison – especially considering a recent US price drop which has brought the console down to $149 – equal to approximately £90. In other words, a mere £20 more than *Turok* costs in the UK.

At under £150, the PlayStation has almost become an impulse purchase. But what are the implications of this move for the industry? If consumers become used to price points like this, will comparatively expensive high-end videogame technology find its way into the living room in the future?

It's clear that competition feeds this industry – one glance at this month's AOU show report will confirm that. But how far are hardware companies willing to go in order to defeat their rivals? With several new consoles currently in development, the answers are just around the corner.

The future is almost here...







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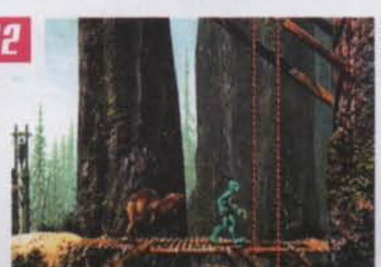
The AOU show in Japan saw Konami reclaim its major-league status


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cutting edge

THE LATEST NEWS FROM THE WORLD OF INTERACTIVE ENTERTAINMENT

Pentium II technology dominates at **CeBit 97**

Intel remains silent as developers reveal tantalising 'Klamath' details

This year's CeBit show, held as ever in Hanover, lived up to its reputation as the biggest and most logistically daunting technology exhibition in the world. As usual, the physical difficulty of traversing 20-odd packed, aircraft-hangar-sized halls, the unavailability of accommodation within a 50-mile radius and near-permanent traffic gridlock in the vicinity made CeBit a painful experience (eased somewhat by the newly inaugurated helicopter link to Hanover's woefully inadequate airport). But the presence of a great deal of hugely important technology, including tantalising glimpses of innovations which could finally see the PC emerge as a more powerful games platform than the consoles, helped ameliorate the CeBit blues.

For PC gamers, the most significant event at CeBit was the first public airing of machines powered by Intel's Klamath processor, henceforth to be known officially as the Pentium II. Several PC manufacturers gave closed-box demonstrations of Pentium II machines, although Intel itself remained tight-lipped about the chip, refusing to reveal prices and clock speeds.

The chip, scheduled to start filtering through to manufacturers in late 1997, is essentially a Pentium Pro with added MMX multimedia extensions. Although destined to be the fastest PC processor ever, it raised a lot of questions. Because its physical design differs to that of the Pentium Pro, PC manufacturers will have to scrap their existing Pentium Pro motherboards and design Pentium II versions from scratch. This, allied to allegations that preproduction chips generate more heat than Pentium Pros, means that Pentium II machines probably won't go on sale for some time and early models will be fearsomely expensive.

The Pentium II plugs into PC motherboards inside a cartridge rather than fitting into a slot as in existing Intel PCs. Intel claims that it has altered the design to overcome memory bandwidth problems which have come into play because of the sheer speed of the Pentium II. According to Intel US's **Pat Gelsinger**, 'When you have a processor chip plus cache working at hundreds of megahertz, you get incredible operating frequencies. We can scale the frequencies with our cartridge design more rapidly than the original slot design.' In other words, it will give Pentium II machines yet another speed boost.

Disappointingly, Intel also revealed that the Pentium II's implementation of MMX is identical to that of the Pentium, so that game developers wishing to address the floating-point registers for 3D geometry and some rendering calculations will have to switch away from MMX commands. Intel pointed out that the Pentium II 'floating-point performance' is stunningly quick, but this will surely provide 3D game developers with yet another reason to ignore MMX. A spokesman for VideoLogic,



The much-hyped DVD format drew crowds curious to see the future of data storage



Although a huge range of technologies were revealed at Hanover's CeBit show, the Pentium II was without doubt the star attraction





IBM revealed its new Aptiva S PC (left), due to be priced at £2,489



This sci-fi phone box was one of a number of non-consumer gadgets shown off at CeBit

however, did suggest that the Pentium II's MMX implementation has some hope of winning over 3D games developers: 'With the Pentium II, you can switch out of the floating-point registers and back to MMX in a single clock cycle, whereas with the Pentium, it takes about 50 clock cycles.' Consumers will find out whether this grips game developers as a viable option (or whether they will just deem it too fiddly) when the Pentium II is officially launched later this month.

Another piece of Intel technology which will bring unequivocal benefits to PC gamers is Advanced Graphics Port, or AGP, which was described by the company's **Pat Gelsinger** as 'an intelligent cross-bridge to the memory, which separates graphics frame buffer traffic from the system bus and gives an intelligent graphics port to the memory.'

In other words, it offers a super-fast route to the memory for graphics information in a broadly similar manner to the fastest existing consoles, and allows the graphics chip to 'share' the PC's system memory. AGP, one product of a deal between Intel and Lockheed-Martin, has been built into the Pentium II motherboard specification and is likely to find its way into lesser machinery around the end of this year. The graphics performance it offers could make some game developers' dreams come true.

ADVANCED GRAPHICS PORT OFFERS A SUPER FAST ROUTE TO THE MEMORY FOR GRAPHICS INFORMATION IN A BROADLY SIMILAR MANNER TO THE FASTEST CONSOLES





Among the desirable technologies on show at CeBit was the Sharp Colour ZR: a digital camera and palmtop PC in one solution. The unit should retail at around a grand

Meanwhile, rival processor manufacturer AMD spoke for the first time about its intriguing new processor, the K6. It claims that the chip, due to start shipping on April 3, performs similarly to the Pentium Pro yet fits into an ordinary Pentium OverDrive Socket 7 slot. PC manufacturers should therefore have no problems tweaking existing motherboards to take K6 processors, and K6 machines should cost little more than ordinary Pentium machines. AMD also pointed out that, thanks to its cross-licensing agreement with Intel, the K6 supports the full MMX extended command set yet, thanks to the fact that the chip's physical design is entirely AMD's own, its MMX implementation does not take over the floating-point registers. In theory, the K6's MMX should be better than Intel's own. But as nobody outside AMD has yet tested the K6, it remains to be seen whether this is true.

A tantalising glimpse of Talisman, Microsoft's next-generation software/hardware specification which will take over from DirectX some time next year, was offered at CeBit – not by Microsoft, which always courts the German press and ignores the rest of the world at the show – but by Philips, one of its Talisman partners. Philips talked about its TriMedia 'media processor' chip, which essentially performs similar processing functions to Intel's MMX extensions but takes them away from the processor, freeing it up for other tasks (such as floating-point calculations). Philips has struck a deal with Apple to team the TriMedia chip with its PowerPC processor, creating a package which should compete with MMX-equipped Intel PCs. Philips claims that TriMedia, in conjunction with a Cirrus Logic 2D graphics chip and a Fujitsu RGB output chip, will form part of the Talisman hardware spec, which, according to the company's **Dion Lisle**, will deliver 'the full multimedia experience with ass-kicking 3D'.

Lisle maintained that the ethos behind Talisman is to provide a 'balanced architecture delivering very high-end 3D graphics'. When Talisman arrives, it could, at last, bring the PC's gaming performance up to levels enjoyed by current consoles. This is something that DirectX has, in some ways, failed to do. Talisman will guarantee a level of hardware performance, as well as including the plug-and-play transparency offered by DirectX. In conjunction with ease-of-use features such as Universal Serial Bus (which, among other things, will enable easy attachment of joysticks and so on to PCs, and which had finally made it into many machines shown at CeBit), it could finally turn the PC into a console-beater. But don't hold your breath: Talisman is not likely to appear in full until late 1998. E

Saturn 2 denied

Further details on Sega's follow-up to the Saturn have recently come to light. It has now been confirmed that the machine, currently codenamed Black Belt, will feature PowerVR architecture. The setup should be based on the PCX2 chip (not the standard PCX1 found in current PC cards), but it is not yet known how many Image Synthesis Processors (the basic graphics calculation unit of Power VR architecture) will be used in parallel.

In addition, Sega is apparently negotiating with Microsoft for the rights to use its Microsoft Arcade Operating System (see suplement). If the deal goes ahead, the console will easily be able to receive ports from Microsoft coin-ops.

Sega is allegedly aiming for a late-'98 launch in Japan with the rest of the world following in 1999.

The revelations, which came from sources outside of Sega, prompted a company spokesman to issue a statement, saying: 'The company is always working on new hardware and evaluating different technologies but we deny the current rumours because this is inaccurate information. I'm sorry but I can't tell you anything about our future plans at this time.'

Konami's Cobra chipset blows Sega away at AOU

The re-energised arcade giant wows gamers with revolutionary hardware and software





Sega thrilled show-goers with AM1's ***House of the Dead*** (top), AM3's skateboard sim ***Top skater*** (left), and AM2's ***Virtua Striker 2*** (right)





Polystars**, Konami's M2 title (above left and right), is an old-school scrolling shoot 'em up embellished with fine visual detail and smooth animation. Although derivative, it attracted its fair share of admirers**

For the last three years, Sega and Namco's clear dominance at the head of the coin-op industry has been slowly eroded by the persistent efforts of arcade stalwarts like Konami and SNK. This year's AOU show – as usual a brash, noisy event taking place at the Makuhari Messe in Tokyo – saw the underdogs finally rivalling their long-standing masters.

It was Konami, though, which made the biggest impression. Last year, the company introduced the first jetski game, prompting a rash of similar titles from other developers. This year, it upped the ante with *Hang Pilot*, an innovative combo of flight sim and racing title, as well as M2-powered title *Polystars* and, most impressively, two demos employing the company's new high-end board.

Cobra, capable of displaying between 1 and 5 million polys per second and a hi-res image of 1,280x1,024 (see **E**40), was to all intents and purposes the star of the show. The two video demos were the beat 'em up revealed briefly at last year's Jamma event and *Racing Jam*. The former, still codenamed *PF573*, has many similarities to *Virtua Fighter 3* and easily matches the Sega title in terms of visual excellence. One stage features a field of long grass, with each blade individually drawn and capable of bending when trodden on by a fighter. The Korean snow scenery is also particularly impressive (as in *VF3*, different weather conditions form an important part of each stage design), and realtime light sourcing works throughout the game to produce some effective atmospherics. The only drawback is that high productions costs will be passed on to the consumer, meaning that Cobra games will cost ¥500 (approx. £3) per play.

Racing Jam, a stunning continuation of the *Midnight Run/Winning Run* racing series, was Cobra's real showcase, though. The near-photographic quality of its texture mapping, combined with the life-like dynamics of the action, left onlookers breathless with




Thunder Hurricane **(top) and** ***Hang Pilot*** **(above) boasted great cabinets**








Konami showed off a realtime interactive demo of Cobra fighting game *PF573*. The title has many similarities to *VF3*: it allows fighters to side-step oncoming attacks and the six officially announced fighters (from Korea, China and Japan) clearly resemble *VF* characters





***Over Rev* is Jaleco's Model 2 racing title**

anticipation. Only a few sections of track were on show – a brilliant Tokyo at night featuring neon signs and skyscrapers with light-reflective windows, and a test circuit showing one of the sports cars spinning realistically through a series of cones.

Away from ultra high-end development, *Hang Pilot* attracted a crowd of onlookers. The coin-op, which combines racing with flight skills (there are dozens of objects to avoid or fly through) features two screens – one to show the route ahead and one the ground below – and a range of new racing tactics. Playing the game is a very interactive experience: to descend and pick up speed, players must pull the glider bar toward them and to adjust balance they have to shift their feet on the base unit. **Edge** senses a whole new genre on the way. *Operation Thunder Hurricane* (see Arcadeview) and shoot 'em up *PolyStars* completed the company's line up. The latter was most interesting for its use of M2 hardware (see this month's supplement).

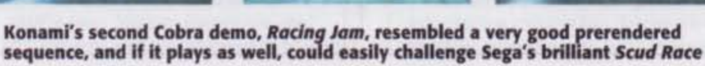
Another big event of the show was the announcement of SNK's new high-end 64bit arcade board, finally bringing the company out of 2D exile. To show it off, *Samurai Spirits 64*, the board's premiere title, was revealed in demo form, and looked more than capable of taking on *Virtua Fighter 3*. The game retains many popular characters from previous *Samurai Spirits* incarnations (as well as adding four new ones) and again offers players the opportunity to use weapons. Interestingly, *Samurai Spirits 64* seems to have taken the *Bushido Blade* route by offering huge arenas rather than closed fighting spaces à la *Virtua Fighter*. Like Capcom, however, SNK will have the difficult task of transcribing its 2D gameplay into a new 3D range of titles. Will it ▶









Konami's second Cobra demo, *Racing Jam*, resembled a very good prerendered sequence, and if it plays as well, could easily challenge Sega's brilliant *Scud Race*



Konami's racer, *GTI Club*, was presented in a futuristic *Road Rage* simulator cabinet



To premiere its brand new 3D arcade board, SNK showed off a video demo of *Samurai Spirits 64*. The game looked fairly high-end but could not compete with Konami's utterly breathtaking Cobra titles

The game also boasts impressive tactical range, forcing the player to adopt defensive of offensive strategies in response to the strategies of opponent teams.

The other AM departments were also present, of course. AM1 had a playable demo of gory Model 2 shoot 'em up, *The House of the Dead*, on show (see page 116), and AM3 presented skateboarding simulation, *Top Skater*. Here the player races against time through a series of courses and, as in *Wave Runner*, must perform a range of stunts while jumping. Every part of the course – walls, ramps, etc – can be skated over, and the animation is extremely fluid and realistic, making for an exciting sports sim.

As with *Hang Pilot*, though, the best feature is its cabinet. In *Top Skater*, the player stands on a real skateboard, pushing back on the tail to jump and swerving from side to side to steer. At least here, skateboarding fans don't have to avoid the old ladies and dog deposits which litter real-life pavements.

Model 3 is still clearly the most advanced technology in the arcade and both AM1 and AM3 have now been given the go ahead to develop on the platform. However, the technology is twice as expensive as Model 2, and, at the moment, is proving not to be as profitable. *VF3* has failed to sell as well as *VF2* and *Daytona*, and *Virtua Striker 2* is pretty much just an update of its already excellent Model 2 predecessor. Sega may have to concentrate more on innovative game designs for Model 3 games if the system is to become financially viable.

Capcom made its first tentative steps into 3D with *Street Fighter EX* at last year's JAMMA show, but the company now seems to have stalled. All three of its major AOU games – *Street Fighter III*, *Vampire Saviour* and *Battle Circuit* (a multiplayer beat 'em up set in a futuristic cyborg-infested world) – are 2D beat





As well as 3D games, SNK showed off 2D beat 'em ups and puzzlers

IN ADDITION TO ITS ACTIVITY IN THE ARCADES, SNK ALSO HAS A NEW CONSOLE IN THE WORKS, WHICH IS RUMOURED TO USE THE SAME TECHNOLOGY AS THE 64BIT COIN-OP

◀ simply translate previous 2D control methods, or will new controls be created for the 3D environment? Unfortunately, answers could not be gauged from the early video on show.

In addition to its activity in the arcades, SNK also has a new console on the horizon. Rumour has it that the home unit will contain the same technology as the new arcade board, facilitating SNK's usual practice of releasing arcade and home versions of its games almost simultaneously. More news should appear toward the end of '97.

Though not the main crowd-pleaser at AOU, Sega had a full line-up of great games to show off. AM2 (which retains its monopoly on Model 3 development for the time being) presented the visually gorgeous *Scud Race* (see **E**43) and the football title, *Virtua Striker 2* (**E**43). The latter makes full use of motion capture to create some incredibly realistic player movement, and includes sophisticated AI routines to make each team play differently.

'em ups, but that didn't stop crowds of avid gamers gathering around the screens. In many ways, the visually terrific *Vampire Saviour* is stretching the limits of the CPS II board and, although both boards are comparable in terms of graphics, CPS III, with its improved speed and fluidity of animation, represents the future. At least until Capcom takes up the 3D gauntlet for real.

Namco also seems to be living in the past. *Tekken 3*, the company's major title, runs on the System 12 board: 50% more powerful than System 11 and capable of much better management of 3D backgrounds. It's no Model 3 beater, of course, and System 33 is still nowhere to be seen. However, what the company lacked in technology, it made up for in wit and creativity. The System 22 title, *Armadillo Racing*, was Namco's unexpected and off-the-wall treat (see Alphas).

Taito, like Konami and SNK, used AOU to show off its new high-end coin-op board. The





SNK's MFX 3000 is a six-person hydraulic ride which shows CG movies










Taito revealed its Wolf board (top left) as well as bizarre train sim *Densha de Go Go* (above far left and centre). Also on show was a new version of *Breakout* clone, *Arkanoid* (above right), featuring new pick-ups and great backgrounds



Capcom's new beat 'em up, *Battle Circuit*, stuck within the company's predominantly 2D remit

Taito Wolf (see supplement) features 3Dfx VoodooLogic technology and is apparently capable of 1 million polys per second. A racing demo produced to show off Wolf looked impressive – better, in fact, than Atari's *San Francisco Rush*, which also uses 3Dfx technology. However, specs have not been released, so it could be that Taito is employing a more powerful configuration of Voodoo chipsets or a more up-to-date version of the technology. It could also, of course, simply be a better game.

On the software side of things, horizontally scrolling shoot 'em up *Darius G* was on show (see **E**43) boasting some gorgeous scenery and smooth animation courtesy of the FX1 arcade board. Taito also had its own share of bizarre innovation. First up, rather unbelievably, was a train simulator called *Densha de Go Go*. Here players take control of a passenger train and must ensure it reaches each station on time. *Magical Date*, on the other hand, is a love simulation game in which the player has to take a number of different girls out on a first date. That's as far as it goes, however, which will doubtless result in a number of frustrated Japanese schoolboys cursing Taito's unadventurous spirit.

The AOU show was a promising mixed bag of technological leaps forward and innovative surprises. Predictably, 3D is almost an omnipotent force now, with only Capcom electing to continue with 2D games unabashed. Novelty cabinets, it seems, have become de riguer and each of the major players was keen to try out its own variations. The downside, of course, is that this pushes up the price to both players and arcade operators, and may well prove self-defeating.

If that sense of innovation could just be focused on the games themselves, instead of their packaging, the future of coin-op gaming would be looking even brighter than it is at the moment.







Of the various amusement park rides on show, Namco's bike machine (top) and its tank battle effort (above) were among the more interesting. Other rides (left) attracted willing victims, too

Fairground attractions

Many of the big coin-op companies presented their own amusement park rides at AOU. Namco, for instance, offered a nausea-inducing bicycle attraction in which users have to ride 360 degrees around a large metallic hoop. The company also showed a tank battle game, allowing players to sit in small tanks and fire balls at each other.

Furthermore, SNK revealed the slightly more traditional MFX 3000, a hydraulic cabinet which shows various CG movies to up to six people at a time while jiggling them about a bit.

AOU round-up

Away from the leaders of the arcade industry, many smaller companies also displayed their coin-op wares at AOU.

Last year Sega licensed its Model 2 board to three developers, Jaleco, Tecmo and Data East, all of whom have produced games using the high-end technology. On paper, at least, the arrangement is beneficial to all parties, providing Sega with royalty payments and the three developers with a great board and none of the usual R&D expenses.

However, the problem here is that Model 2 games often look rather similar – hence Tecmo's *Dead or Alive* is a dead ringer for *Virtua Fighter 2*, while Jaleco's *Super GT24h* is reminiscent of *Daytona USA*.

Perhaps as a result of this, Jaleco was the only one of the three to present a new Model 2 title at AOU. *Over Rev*, like *GTI Club*, is an urban racer which requires the player to navigate some incredibly narrow alleys.

Tecmo chose not to use Sega's board for its 'interesting' horse racing game, *Gallop Racer*. Here players have a choice of different horses and must select the best one for the course in hand. Both the game's backgrounds and its equine racers are constructed from polygons and a variety of camera angles are used.

Data East, meanwhile, showed off an SNK-licenced puzzle game in the *Bust-a-Move* mould, entitled *Magical Drop 3*.

Tecmo and Data East will no doubt return to Model 2 in the future, but innovation will be needed if their games are to make a strong mark.

Multimedia market hits **crisis** point at **Milia 97**

This year's Milia new media show saw few surprises, but several casualties of a dying scene

3Dfx part two

The follow-up to the popular 3Dfx Voodoo graphics chipset has been revealed.

Codenamed 'Banshee', the new chipset is expected to offer performance similar to 3Dfx's XS100 technology.

Otherwise know as Obsidian, the XS100 board is currently intended for use in military simulators and high-end graphics modelling workstations.

A 3Dfx spokesperson has denied the existence of 'Banshee' but developers maintain that the board is expected to reach the market by early 1998.

Price details are obviously not yet available, but the board is expected to clock in at an affordable, mainstream rate.

The multimedia industry's recent gathering at Milia in Cannes ended up looking to gaming for future growth, technological innovation and new markets. This was the only logical conclusion from what was essentially an event which heralded the death of multimedia.

The shock announcement that top CD-ROM outfit News Multimedia (producer of the wonderful *Makers of the 20th Century*) was being shut down cast a pallor over the show which was hard to shake. An awful lot of publishers spent the show looking for ways to repackage or resell the same discs they'd failed to make anything from since the show the year before. It was surprising, then, that Electronic Arts chose to launch its own reference/education range at the same expo. The fact is, though, multimedia has produced winners – like Disney Interactive, which spent the show boasting from its yacht that it had already paid back its startup costs and turned a healthy profit. All this from licensed discs based around 'Toy Story' and 'The Lion King'.

By far the most interesting new technology debuted at Milia was UK-based Pepper's Ghost Productions' avatar engine. Its faces, which are all capable of showing a wide range of emotion in real time, appear photorealistic, because the rendering process involves wrapping a photo, rather than merely a texture map, around a wireframe. The first game to feature this new generation of talking heads, *Burning Ambition*, is still in its early stages – but playing the *Resident Evil*-style demo **Edge** couldn't help but feel that the storyline will have to be compromised just so players can get close enough to each other to really appreciate the range of emotions available.

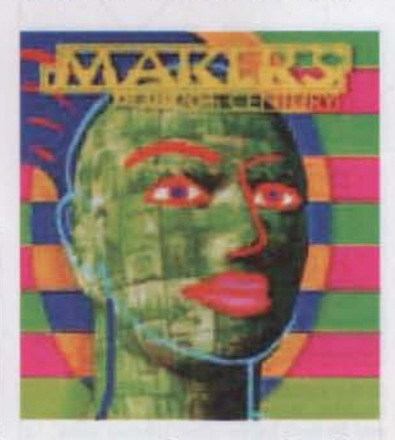





No, this aren't photos, but polygon models mapped with photorealistic textures by Pepper's Ghost Productions' avatar engine. Impressive stuff

Psygnosis and BMG turned up at Milia with very little new to show off, but Eidos was there in force selling much more than just games. The main reason for its presence was to promote the latest version of its video compression and playback Codec – now featuring a more user-friendly name ('Escape') and a more intuitive interface at developer level. Eidos's was also the stand with Spice Power, showing off Glass Works' contribution to the Spice Girls promo for 'Say You'll Be There'. You could hardly see the join as the same screen also featured a sneak peak at the new rendered sequences from *Tomb Raider 2* – looking very impressive, of course.

Plenty of developers and publishers had vague ideas that they were going to turn the corner with the appliance of science – or more specifically DVD. However, while hardware and astonishing MPEG2 demos were in evidence, no one could answer the thorny question of just how masses of extra storage capacity was going to put a new spin on an industry with some serious shrinking pains...



Milia's biggest shock was the announcement that News Multimedia, producer of *Makers of the 20th Century*, was about to cease trading



Demanding times for **N64**

The console gets a keen reception in the UK, while NOA takes action against pirates





The UK N64 launch party featured dozens of Nintendo consoles, all running key titles

Nintendo has surprised the videogame industry by announcing an N64 price drop in Japan and the US. In the east, the machine will now retail at ¥16,800 (£90), as opposed to the previous price of ¥25,000 (£130). The States sees a reduction to $149 (£90) from $199.

Nintendo's motives for the move are unclear. The company itself claims price drops are simply a result of lower production costs, due to the higher volume of machines being produced. However, industry analysts suspect that Nintendo has been forced into the decision by the intensely competitive nature of the Japanese videogame market, and by the recent US PlayStation price drop to $149. Neither Sony nor Sega has announced a similar price drop in Japan.

Meanwhile, in a modest re-enactment of the N64 launch frenzy which hit Japan and the US last year, the early hours of March 1 saw hardcore gamers gathering outside UK videogame shops for a cold night of queuing. According to Joe McNicholas, Virgin's senior product manager, several customers slept outside the Liverpool and Reading Megastores on Friday night hoping buy an elusive 64bit console. Unfortunately, because a huge proportion of the 20,000 machines allocated to the UK were pre-ordered, many of those who queued for hours had to be turned away empty-handed. Apparently, Virgin only received 10% of the machines it had ordered, and the average time it took for these stocks to sell out was just 12 minutes.

To save committed gamers from sleeping on the streets all night, larger branches of Electronics Boutique actually opened up at midnight on March 1. At the Oxford Street branch, around 20 customers turned up to collect their pre-ordered machines (and also find themselves being filmed by GMTV). Also on Oxford Street, HMV took delivery of 50 machines on March 1, with another 50 arriving later in the week, all pre-ordered. None of the major retailers predict readily available machines until April.

The early success of Nintendo's machine was preceded by a launch party held at the Riverside Studios in Hammersmith. The event attracted a plethora of celebrities, including Bob Monkhouse, who performed a half-hour comedy slot in which the PlayStation was the target for half his jokes while, slightly more predictably, his wife bore the brunt of the other half. During the event, guests were given the chance to play several N64 games.

On the other side of the pond, Nintendo of America is stepping up its fight against software piracy in the wake of the US N64 launch. The company, which claims it is losing an estimated $800m per year through piracy, has urged acting US trade representative







Bob Monkhouse (top) performed at the UK launch party before cutting the celebration cake. Outside, *Turok* was advertised in original style

Charlene Barshefsky to take action against five countries identified as counterfeiting hot spots: China, Hong Kong, Taiwan, Paraguay and Venezuela. Three of those countries – China, Hong Kong and Taiwan – have been targeted before, but Nintendo is arguing that they remain the largest sources of counterfeit videogame products in the world and that sanctions should be renewed. According to a recent press release, 50 other US companies involved with Nintendo are supporting the sanction recommendations.

In a separate offensive, NOA has also filed a lawsuit against Taiwan semiconductor manufacturer Winbond Electronics. The videogames giant claims that it has identified chips made by Winbond in certain disk copier devices currently being shipped worldwide which allow users to copy N64 titles on to floppy disk and/or hard drive and then feed that information into blank N64 carts.

This is the latest in a long line of anti-piracy measures undertaken by Nintendo: the company has filed hundreds of lawsuits against copier manufacturers over the last ten years. If the Winbond action is successful, however, it may prove a significant victory in a very long war.



Nintendo is waging a war of 'zero tolerance' against manufacturers of copying devices

(out there)

REPORTAGE FROM THE PERIPHERY OF THE VIDEOGAMES INDUSTRY

How to recapture a generation

If videogames have social credibility at the moment (and all indications suggest that they do), it's mostly due to the Herculean efforts of the PlayStation marketing team. In early 1995, with the machine still in its infancy and the industry unsure of its future, **Geoff Glendenning**, the head of marketing for the console, began to sow the seeds of acceptance for the PlayStation by establishing tie-ins with Glastonbury, *The Face* magazine and top London club Ministry of Sound, as well as setting up chill out/sampling rooms at a number of parties in London prior to launch.

So what made the Sony team target clubs? **Pippa Day**, product manager, explains: 'Basically, the initial strategy was to market the PlayStation toward the key influencers, and obviously they are aged from 20-30, with the key age 24 – the average age of clubbers. Also, there is a very natural link between playing videogames and clubbing, and I think people were getting bored of just going and dancing. They wanted something else to do, and through the PlayStation they are now able to relax while they were out – have a drink, talk to their friends. Clubbing has become more of a social event, rather than just going out and dancing solidly for hours.'







The placement of PlayStations in clubs has become a remarkably popular venture for Sony, with 34 of the most credible venues now sporting videogame rooms. Furthermore, the PR department for the machine has set up a gaming league amongst DJs which has been followed with much interest in the dance music media. Again, Sony is targeting the trend setters and the role models, and the message is getting through; the console has become almost a staple part of British club culture, finding its way slowly into the heart of the dance scene.

'I know, for example, that a lot of DJs will work in the studio all day and then they've got Playstations in there for relaxation purposes,' enthuses Day. 'So when they're having a few beers, that's it – they start playing. And obviously, there's a very competitive streak within the DJ fraternity to be the top dog at *Tekken 2*.'





The targeting of youth culture is now expanding beyond clubs. Sony plans to put PlayStations in NUS bars up and down the country, and is also sponsoring a number of sports such as snowboarding (Glendenning recently attended the British Snowboarding Championships), skateboarding and snakeboarding. The PlayStation even has its own sky surfer, Mike Frost – Sony pays for his equipment and in return he jumps out of planes with a board and parachute emblazoned with the PlayStation logo.

The embarrassment that some used to fear by playing videogames has now dissipated. With artists such as Goldie, Carl Cox, Skunk Ansansie and the Chemical Brothers taking PlayStations to their hearts, the activity has long since lost the baggage that once seemed to go with it.

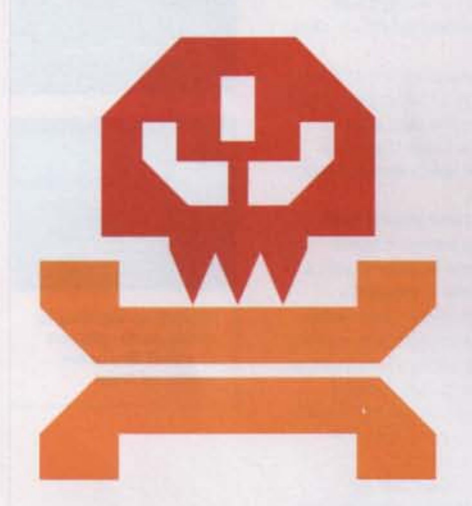
And what do the traditionally conservative Sony bigwigs think about all this? 'I think they've obviously realised that this marketing strategy has actually made sense,' comments Day. 'By pushing this as a must-have brand, it's put them in a stronger position, because once they've marketed to the 20+ age group, that then filters down and you get the pester power of little kids going, "Mum, mum, mum, I've got to have a PlayStation..." It's a very aspirational product.' Aspirational product? It was never like this with the Spectrum...

(out there)

Warp factor







Following its foray into club culture at Islington's Complex, Gremlin has enlisted the talents of fellow Sheffield successes Warp Records and Designer's Republic. They'll be working on the soundtrack and in-game logos for Gremlin's imminent sci-fi trading game, *Hardwar*. DR are no strangers to the clubs/games culture, having been heavily involved with the game that kicked the whole thing off, futuristic racer *Wipeout*. For Warp, however, it's something they've wanted to do for a long time.

'A couple of the creative guys at Gremlin grew up with Warp here in Sheffield,' explains Warp's Greg Eden. 'They'd been wanting to use the music in a game for some time, and we had been approached to do music for *Wipeout 2097* and that fell through, but it got us interested in the idea. LFO, who's on our label, is a complete game nut, and wants to do an original track. Most game soundtracks are completely crap – *Duke Nukem*, for instance, typical power-chord stuff, complete shite. It's got to be a good idea to have professional musicians creating the music instead of these in-house guys who don't have a clue about what's going on out there.'

This really isn't on the same scale as *Wipeout*, though. Warp aren't keen to release a standalone soundtrack, as almost all the music used in the game is back-catalogue and Warp hate the idea of re-releasing old material. They may want to reconsider, though, as *Hardwar*, originally slated for a simultaneous PC and PlayStation release, will now only be available on PC – and you may not see many PC owners gracing the likes of Ministry of Sound or Manchester's Club Code. Except to add up the takings, that is.

Nintendo taken for a ride

Nintendo executives may be frighteningly serious about the videogames industry, but that obviously doesn't rule out the odd PR prank. Last month, in order to promote the US launch of *Mario Kart 64*, NOA chairman **Howard Lincoln** and president **Minoru Arakawa** took part in a real go-kart race around the company car park. NOA employees were invited to 'bet' on the winner, with all money raised going to charity.

The race was a hair-raising encounter which would have had Murray Walker frothing at the mouth. Arakawa took an early lead and held it for two laps, relying on sound racing skills – no doubt honed to perfection on *Mario Kart* itself. However, Lincoln refused to give up, even when he hit the pavement, going up on two wheels in the process (drawing a few grimaces from Nintendo's insurance company, **Edge** suspects). On the third lap, the chairman sneaked round the outside to steal the lead and, ultimately, victory.

Although both parties admitted that they had enjoyed the experience, Lincoln stressed that this would not be an annual event. However, the race may well prompt Yamauchi and Miyamoto into a bout of sword-fighting for the release of *Zelda 64*. If so, **Edge** will put a fiver on the chairman...



Photography © Nintendo Power

Internet raiders

Multiplayer 3D space combat has long been the stuff of idle daydreams. Now it is becoming a reality courtesy of Interactive Creations

Many of those who became irrevocably addicted to *Elite* in the mid-'80s dreamed about a time in the future when it would be possible to fight and trade against real human opponents. For a long time, the technology simply wasn't available for such a huge endevour. Now it is, of course, and Interactive Creations, Inc (which has just merged with Interactive Magic) is about to bravely step into the multiplayer space combat/trading sim arena with its forthcoming online effort, *Planetary Raiders*.

The story behind the action, as with most mulitplayer games, is of secondary importance. Apparently a dying planet named Osis has been saved from extinction by a visiting alien who provides the inhabitants with lots of desirable new technology. This gives the population a fighting chance against the elements, but also allows certain corporations to get bigger and bigger, trading in new weapons and hi-tech gear, and expanding out into space travel. In short, capitalism has arrived in style, and everyone wants a piece of the action.

Predictably enough, players join the game as Osisians desperate to make money. Each starts with a small ship and 1,000 bochfs (perhaps the most ridiculously named fictional currency ever created) and must first carry out a series of military missions in order to gain a decent working knowledge of space flight and combat. After this, the game is apparently completely open. Players can become space pirates, traders, corporate hustlers, space station mangers, etc, and can even join a squadron (as in *Air Warrior*, Interactive Magic's long-running Internet flight sim) or explore the galaxy alone. It will also be possible for players to upgrade to more complex ships, and to design their own. Add to all this the fact that communication between inhabitants of the virtual galaxy will also be a feature (likely to result in some lengthy deep-space slanging matches) and it seems the designers have delivered everything *Elite* players pined for back in the days when Internet gaming was but science fiction.

Even with contemporary technology as it stands, this is an ambitious project. When *Planetary Raiders* is setup for real in June, the game will apparently be able to deal with over 2,000 players – 200 on each of the ten servers. Admittedly, the graphics look a little basic – ships are constructed from flat-shaded polygons and there are no *Darkening*-style lens flare or lighting effects – but that is to be expected considering it will be running over the Internet where data latency problems are still rife. In any case, many retro gamers will argue that *Elite* was addictive and enjoyable enough even with its constantly flickering vector graphics.

Visual concerns aside, if *Planetary Raiders* really is as open as the pre-publicity suggests, and the playing area is large enough to support a variety of planets and space stations (ICI has not revealed how many planets to expect, but there should be around 20 space stations), this could well become one of the key events in the development of Internet gaming.

Judging by the fact that ICI has already produced *War Birds*, one of the first and most popular Internet flight sims available, it's certainly difficult to imagine the company fumbling this project. This is good news for PC gamers who have been promised an online gaming revolution for months, but who, for want of alternatives, are still plugging away with the likes of *Quake* and *Meridian 59*. E





As well as docking in space ports, players can visit the home planet of Osis





As in *Elite*, mastering the docking process is as important as space flight combat skills





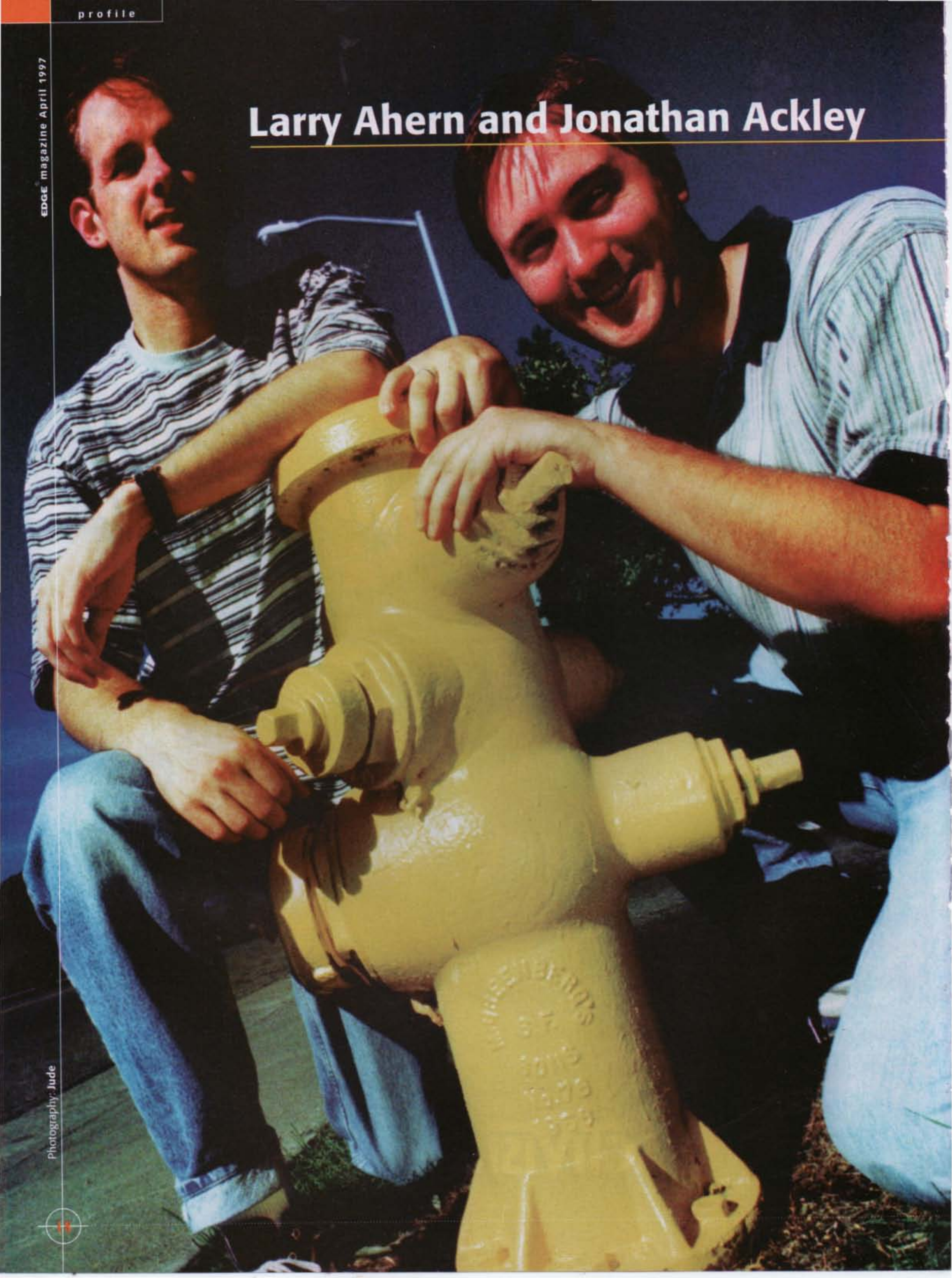


Though *Planetary Raiders* uses flat-shaded polygons throughout, the game still looks impressive – especially considering that it's playable over the Internet. A huge range of spacecraft are set to embellish the galaxy with detail

More info

Planetary Raiders
Interactive Creations' website provides more details of all its Internet games, including how to become a beta tester. It can be found at: www.icigames.com

Larry Ahern and Jonathan Ackley



Photography: Jude

co-project leaders, LucasArts

It is very rare that people get the chance to talk about their favourite videogames in the same way as they discuss their favourite films: picking out classic scenes, reiterating the best jokes and debating the key characters with genuine warmth and affection. The *Monkey Island* adventures from LucasArts are among a very select group of titles where this kind of thing happens.

The first *Monkey Island* appeared back in the 386 days, when the PC was still in its infancy as a games platform. What impressed gamers about it was the intuitiveness of its point-and-click interface and the sheer depth and great humour of the brilliantly designed storyline. Characters like Stan the second-hand ship salesman, and scenes such as the insult fights and the first encounter between the lead character, Guybrush Threepwood, and Elaine stick out in the mind long after end-of-level bosses and secret sections of other games have slipped away. *Monkey Island 2* was, unlike most sequels, more of the same: non-linear, surreal and utterly enthralling.

The success of the titles is down to people like Jonathan Ackley and Larry Ahern – co-project leaders on the third instalment, *The Curse of Monkey Island*. Both have long histories at LucasArts. Jonathan worked as programmer on *Day of the Tentacle*, *Full Throttle* and *The Dig* ('For a short time I went to another company, but I don't like to talk about that'), while Larry began as an animator on *Monkey Island 2* before progressing to lead animator on *Day of the Tentacle* and *Full Throttle*.

On a recent jaunt to the States, **Edge** met the guys and tried to extract from them as much information about *The Curse of Monkey Island* as possible.

Edge: How do you think the LucasArts adventures have changed since you've been at the company?

Jonathan Ackley: Well, the graphics have got better! Actually, what we're doing with *Curse of Monkey Island* is a reaction to how the LucasArts adventures have changed, because we wanted a game with really deep gameplay. Recently, the games have been slightly shorter. With *Full Throttle*, for example, the real push and punch was the cool use of video cuts. Our goal with this game was to have all the punch of *Full Throttle* – y'know, that 'gee-whizz' factor – but also the gameplay and depth of, say, *Monkey Island 2* or *Indiana Jones and the Fate of Atlantis*. We wanted to step back, because this is a sequel and because we wanted to be true to the style of gameplay that made the other *Monkeys* so popular.

Edge: Are you not worried that graphical improvements have taken away some of the charm inherent in LucasArts adventures?

JA: Well I'm not sure about the charm of the games – I thought *Full Throttle* was a pretty good game, but I felt what they were lacking was game length.

Larry Ahern: And a lot of the little details that get thrown in.

JA: You know, I think when people get frustrated with an adventure game, it's when they hit a brick wall and there's nothing funny or interesting or new to do. In any adventure, you're going to hit a brick wall sooner or later, it's just the nature of the genre. You want the puzzles to be hard. However, we wanted to make the environment full and interactive so when players hit those brick walls, at least they're being kept amused while they're trying to find their way through.

Edge: Where has the inspiration come from for Curse?

LA: As we started working on puzzles for this game we knew we wanted to try to get into a few more piratey situations. We were looking at getting the player to actually shoot a cannon at another boat and do some more swash-buckling kinds of things – things we weren't able to include in *Monkey Islands* 1 and 2 because of technological limitations. So that's set us up for a few puzzles.

JA: We really liked the non-linearity of *Monkey 1*. Particularly the three-trial structure on Melée island. So in *Curse* we actually have two complete islands and each one has a three- or five-trial structure. So if you get stuck in one direction, you can go and explore another, and if you're stuck on that one, there will be another one, so you can always go back and forth and solve puzzles in just about any order.

Edge: Over the last few years players have been turned on to games like Doom and Quake – are you worried that those games are going to find it hard to return to mentally challenging titles?

JA: I don't think so. I think the reason *Quake* and *Doom* are so popular is just because they are great games and I think if we come out with a great game ourselves, albeit a different kind of game, I think people will really buy into it and enjoy it.

Edge: At the end of Monkey Island 2, it all became a bit abstract with Guybrush waking up at a funfair and seeming to find out the whole adventure was a dream. Is that going to be carried on in Curse, or will it go back to the world of the original Monkey Island?

LA: We do deal with all that, but it was definitely something we were kind of all sweating over as we were first working on the designs. It was like, okay, we don't want to ignore what happened at the end of *Monkey 2*, but it was kind of a complicated situation that they left us in. So not to give too much away, what basically happens is that, at the beginning of *Curse* we start with Guybrush not being fully aware of what happened himself. He starts off thinking it was all down to some kind of voodoo curse, and as you play the game it evolves and Guybrush slowly figures out what happened to him.

So for people who maybe haven't played *Monkeys* 1 and 2 before, or haven't played them in a while, *Curse* kind of retraces some of the steps, and explains lots of little nitty-gritty things that somebody might want to know. But if they don't care, they can just skip right past that.

JA: We knew that the gamers who played *Monkey Island 2* would hate us if we didn't explain it! We also realise that there are thousands and thousands of people who haven't played *Monkey 2* who will potentially be playing *Curse*, and we want to suck them into the story. Consequently, the information is there if they want it, but they don't have to pursue that line of questioning if they're not interested in it.

LA: Also, *Monkey Island 2* leaves you at this carnival setting and we didn't want to start *Curse* with 'Hey, okay, you bought a pirate game, but here we are at a carnival!' That's also part of the reason *Curse* sort of jumps ahead in time and Guybrush is kind of hinting at these carnival-related things, but he doesn't necessarily know exactly what happened to him. He has to retrace his steps and find out again how all the things relate. So the player dives right into the big piratey adventure kind of thing, then everything else kind of comes out as you play.

'We wanted to create an environment so full that when players hit a brick wall, at least they're being kept amused'

Guybrush Threepwood will, of course, return for part three of the *Monkey Island* series, as well a slew of new characters

Edge: The Monkey Island titles have featured some great scenes and some brilliant characters. Which have been your favourites?

LA: I like the pirates at the Scum Bar, myself – the guys that give you the three trials. I thought they were pretty cool. I like Meathook.

JA: I like the insult sword fighting, and I liked Stan quite a bit.

Edge: Will he be appearing in Curse?

JA: Oh, we just can't say. We just can't say. But rest assured, some of your old favourites will return.

Edge: Presumably there are lots of new characters. Where did the inspiration for them come from?

JA: We had some general ideas of character types that we wanted to see in an adventure game that we hadn't seen before. And also, when we were inventing the puzzles, we were trying to come up with exotic and interesting locales and then we thought of characters that might fit those locales.

LA: Like, for example, we have a pirate barber shop called The Barbary Coast – y'know, pirate barbers: hey, that's fun!

Edge: From playing Monkey Islands 1 and 2, **Edge** got the impression that the team thoroughly enjoyed creating the games. Is that still the case?

JA: Yes, it's definitely still the case. It's just a joy for me as a programmer when new art comes through and I see it in the game and it makes me laugh. Larry and I will have been working on this game for two years by the time it's all over, and I certainly expected to be tired of the gags. You think of the gags and you write them down on paper, and you think, well, I'm going to be ready for the punchline, but then when you see how these guys have animated it, or hear that certain sound effect the sound guys have given to a situation, it just comes alive and it cracks me up.

LA: Just yesterday we were putting in a bunch of facial gestures and started flowing in lines of dialogue we've seen a thousand times before and all of a sudden Guybrush is acting and we're laughing our heads off.

The Curse of Monkey Island will be released in September/October



Ron Millar

Photography: Michael Donald

partner, Redline Games

To many people, leaving Blizzard must have seemed like an odd move for **Ron Millar**. With the hugely successful *Warcraft 2* still selling in bulk, RPG *Diablo* doing the business and *Starcraft* on the horizon, the accepted wisdom is that now would be a good time to *join* the company, not leave. But Millar, the creative force behind all these titles, not to mention the original *Warcraft*, felt the time was right to break away. **Edge** caught up with him at Activision's press day, held, appropriately, in the medieval setting of Shopenhanger's Manor, the tasteful half of Maidenhead's Holiday Inn, where he spoke about the split with Blizzard, the work he's doing for Activision, and his new company, Redline Games.

Edge: How did you get into the games business?

RM: I was always into games when I was a kid. My dad worked in computers, and he used to get into trouble, because he'd bring these computers home with him, and I'd end up just playing games on them all night. But I used to hang out in arcades and I played mostly Apple II stuff, and from there I got into programming a little and designing my own games. I had some friends who were already in the games industry and when I lost my job loading trucks I got more into artwork, using my ST, and got my foot in the door at Virgin in 1990 – as an artist. I liked programming, but it was too much hard work. I would have had to get up early in the morning and study math and things like that – not really my style.

Edge: You were fired from Virgin. What happened?

RM: Well, I worked there for a while and I was coming in late and there were some other political problems – I think I was just too opinionated. I was supposed to be an artist on a game and I was telling them how to redesign it, which they didn't appreciate too much. I was pretty young at the time, and very, very opinionated. Anyway, they fired me. The official reason was 'coming in late'. So I got a job at Silicon Synapse, which was Blizzard at the time.

Edge: You stayed, you didn't get fired, and you were really there when the company made its first step towards what it is today, with *Warcraft 1*. It must have been an exciting time.

RM: It was. Blizzard was great for a long time. I worked on a lot of games, on both the art side and games design – *Rock 'n ' Roll Racing*, *Lost Vikings*, *Blackthorne*. We did a lot of console stuff, a lot for Interplay and then one day we started on *Warcraft 1*, which was when it really took off. That was when we got bought out and changed the name to Blizzard. That game was really important for me – it was a sleeper hit, you know, it sort of gradually built up a following, and it paved the way for some expansion. And they said, well, how about *Warcraft 2*? And I said yes. It was my baby, and I had a lot of great ideas that I couldn't use in the first game.

Edge: It was a huge success. How much of it was down to you, personally?

RM: There was a great team there, and I'd say that of the team, there was a core group of about six of us that really made the game what it is today. My side of it was more the missions and what units would be in the game, because I come from a pretty heavy wargaming background – I loved Warhammer and Magic, and I think it's pretty obvious to see those influences in the title. **Chris Benson**, who's a designer there, was a good friend, and we used to hang out together and play D&D and that stuff, which really gave us that coherent, common point of reference when it came to building that world.

Edge: You worked on *Diablo* and also on the forthcoming *Starcraft* at Blizzard. The way you describe it, you seemed to fit right in. So why did you leave?

RM: Several reasons, actually. I began to feel as if I was stagnating creatively. I'd do things like change my office around, and try this and that, just for the sake of it. Despite that cool environment and great people, I just needed a change. When you work on something as hardcore as *Warcraft 2*, you go through some really hard times with each other, and some of those guys are like family to me. But by the same token, that sort of intensity leaves you a little burnt out and you need to get with fresh minds and fresh people.

I also found the corporate environment difficult. I always preferred Blizzard the way it was, when it was smaller, and I needed more creative freedom. It can't be helped, though. With big success comes big money and big decisions and bigger management. Blizzard's pretty good at keeping a lid on that, but it's inevitable that a few bad ideas will slip through the net. *Diablo* wasn't really what it could have been, or should have been, in my opinion. Another factor was that for some time I had wanted to branch out on my own and try out some of my own ideas.

Edge: Any regrets about leaving just before *Starcraft* is released? It must feel like running most of the race, only to drop out a foot from the tape.

RM: Yes, it does feel strange, and it was an extremely hard decision to make. I had a huge involvement in the game, more so than with *Warcraft 2*, even. *Starcraft* has some really original stuff in it, like three vastly different races to control, with different intelligence, tactics, everything. So it was hard, but I felt I couldn't wait any longer. I left Blizzard before I saw Activision's *Dark Reign*. It was really tough leaving, and I was looking round, and I wasn't really sure whether I wanted to consult or do my own thing or what, and when I saw *Dark Reign*, I just thought, wow! It excited me so much that I really wanted to be part of it. My room-mate and business partner, James, had worked a lot for Activision, and he got me to meet the team, and we got on and I thought, I'm glad I left. So now I'm a design consultant for that game and we'll probably work with them for our own titles under my company, Redline Games.

Edge: Redline Games?

RM: I set it up as a design consultancy/developer. We will be doing a game and it will be published by Activision. I'm hoping it will be published by this time next year, but time is really not an issue at the moment. I'm going to be taking a break from strategy games after *Dark Reign*, so that gives you a clue as to the kind of game it won't be. We didn't really have that much of a problem setting it up, either – because of our past experience in the industry, getting backing was easy. Obviously, it takes a lot of cash. The average game costs between about $1-2 million to make these days, but I'd prefer that to be spent on the game rather than cosmetics and poorly acted *Wing Commander*-style cut scenes. The hardest thing about setting up a company like that is finding the right office space and finding the right people to work for you. It's tough to find people who aren't jaded, people who are fresh and who haven't worked in the industry before but who have something great to offer. New blood is tremendously important – this industry is bad like that, we tend to just recycle the same people over and over.

Edge: There seems to be a trend towards key designers leaving big companies – people like **Peter Molyneux**, **Chris Roberts** and **Sid Meier**, to name but a few. Why is that, do you think, and why now?

RM: Designing games takes a lot of resources, and that means a big company most of the time, with a lot of people. I know that id said in *Wired* that they're less worried about big companies than they are about two guys in a garage coming up with the next *Quake*, but I think that's unrealistic. The bare minimum you need today is 12 people to develop a game, and I think what people are really searching for is the right environment to create in. Big companies address this with internal studios, but it's not quite the same as having your own small outfit. It's okay if you're just starting out in the industry. I think for me and for these others you mentioned, the reason we want to go smaller is because then when we make a game it's our game – it's our company. I was really starting to feel at Blizzard that what I was working on wasn't really mine any more. I was working on five separate projects, and spread so thin that nothing I worked on ever got the attention it needed. I'm hoping the games industry will move towards the band model, where you get to create, and the big companies take care of all the legal, practical stuff. That would be cool. E

'It's tough to find people who aren't jaded, people who are fresh, who haven't worked in the industry before but who have something to offer. New blood is important'







Activision's promising wargame *Dark Reign*, due for release on the PC in June

Prescreen Alphas

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PC owners have been kept waiting so long for Activision's driving shoot 'em up, *Interstate '76*, that many will feel it was actually 11 years ago that they first heard of the game. At last, however, the mission-based thriller is nearing completion and these latest shots show a game of distinctive visual style and retro authenticity. At the moment it looks very much like the video to the second Spice Girls hit, 'Say You'll be There' (muscle cars, desert badlands setting, etc), but hopefully the game will be more like 'Mad Max'-meets-*Destruction Derby* than ex-topless model-meets-mouthy northern bints.

There is more on the way from the Activison stable. *Quake Mission Pack No. 2: The Dissolution of Eternity*, for example, has been developed for Activision by Rogue Entertainment and, like the first Mission pack released last month, is for use with id's original *Quake* CD-ROM. *Dissolution* boasts two graphically separate episodes: Hell's Fortress, set in the Dark Ages, and The Corridors of Time, which mixes historical scenery from a number of eras. The title's 16 oneplayer levels feature eight new monsters (including fire-breathing dragons, phantom swordsmen and disembodied spectral swords) and there's also a range of new weapons, including a vicious multi-grenade launcher. All this is accompanied by some redesigned deathmatch arenas and a version of the popular Internet *Quake* game, Capture the Flag. What self-respecting psychopath could refuse?

Activision is also publishing two action strategy titles over the coming months: Titanic's *Netstorm* and inhouse effort *Dark Reign* (developed in conjunction with Aussie codeshop, Australis). The former, due out in the summer, has been designed for play over the Internet and allows participants to develop fortresses, spy on enemies, form alliances and trade assets. As usual for these affairs, players can command a range of different units and the action is viewed from a top-down perspective. However, the game does boast the original feature that each player starts off on an island of land floating in the sky. These











Activision's *Interstate '76* promises to be a stylish driving shoot 'em up and will probably benefit from the latest 3D acceleration technology





The second *Quake* mission pack, *Dissolution of Eternity*, adds 16 new levels to the game as well as some great creatures, including a dragon (far right)













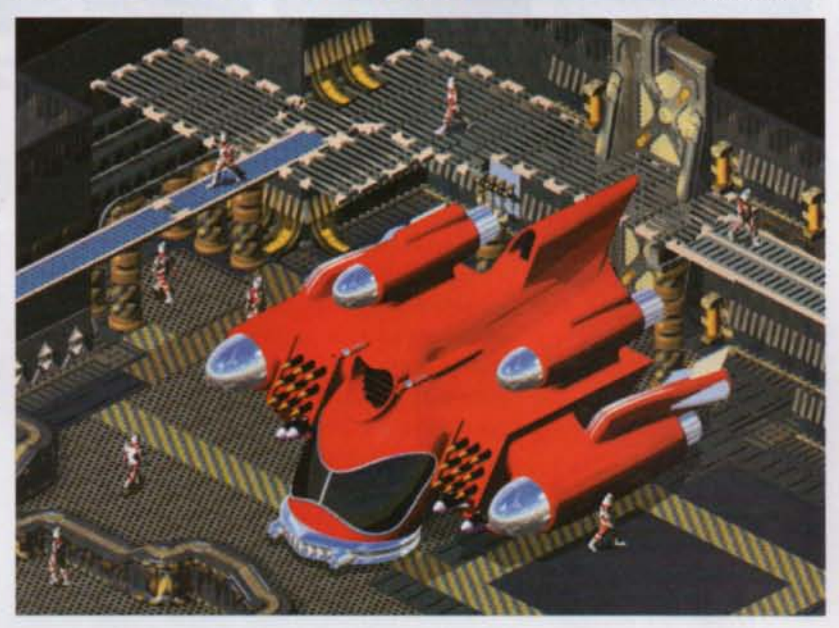
The Saturn version of *Resident Evil* (above) is at last on the way and should feature a few alterations – in terms of both visuals and narrative







The third *X-COM* title, subtitled *Apocalypse*, will be the first in the Microprose sci-fi trilogy to offer realtime combat



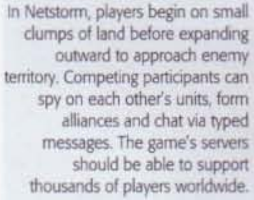
islands have to be extended and protected by the players while they also create military units with which to attack each other's bases. According to Activision, the server will be set up so that players begin on a novice level, and can then work their way up through the ranks, battling more proficient foes as they go.

PC title *Dark Reign: The Future of War* is not a Net-based title (although it does boast modem and LAN support) and should find its way into the shops by June. Again, though, it's *Command and Conquer* done slightly differently – this time in a futuristic galaxy ravaged by war. Players can choose to represent either the Imperium, a tyrannical empire, or the Freedom Guard, a rag-tag bunch of space rebels. Whichever side is selected, the game is fought over 30 mission-based battle scenarios taking in locations such as volcanoes, jungles and ice plains – all rendered rather effectively in hi-res SVGA. There are 34 different combat units and it's possible to customise the amount of control the player has over them, emphasising the management elements of the strategy sim.

The game's main selling point is perhaps its true line- ▶









In Netstorm, players begin on small clumps of land before expanding outward to approach enemy territory. Competing participants can spy on each other's units, form alliances and chat via typed messages. The game's servers should be able to support thousands of players worldwide.











Dark Reign transfers the standard *Command and Conquer* battle strategy concept to a futuristic galactic warzone. Each of the game's diverse landscapes feature true line-of-sight, so players can use topographical features as cover







Konami's *Dracula X* (E43), blends conventional platform action with RPG elements. The use of totally 2D visuals is rare on the PlayStation and lends the game a highly distictive look. Judging by these shots, 3D will not be missed at all





◀ of-sight system, which means units controlled by an opposing force can't see the player's units if they're all hiding behind a bush or hillock. This adds an extra strategic level to a genre fast running out of new ideas.

Staying in the realms of strategy, Microprose is currently finishing off the third title in its magnificent *X-COM* series. *X-COM: Apocalypse* offers a choice of realtime or turn-based combat and a greater range of battle tactics, weapons and movements (including crawling and climbing) than the previous titles. On top of that, there's the sharp SVGA graphics and an ending which takes the player to the Alien world. Despite being a second sequel, *Apocalypse* still manages to look more original and innovative than most other strategy titles competing in this crowded marketplace.

On the subject of over-crowding, Digital Integrated Designs will be launching its visually stunning PC flight sim, *TFX F22*, into an airspace heavy with similar titles. The company does, however, have a head start on many rivals: it is already responsible for *EF2000* – a landmark modern air combat title. *TFX F22* shouldn't suffer too many difficulties distinguishing itself, though – boasting real F22 avionics suite emulation, accurate air-to-ground and air-to-air weapons modelling, configurable missions and multiplayer support, DID seems to have everything a propeller-head could want wrapped up in one bundle. For everyone else, the F22 (America's next generation combat







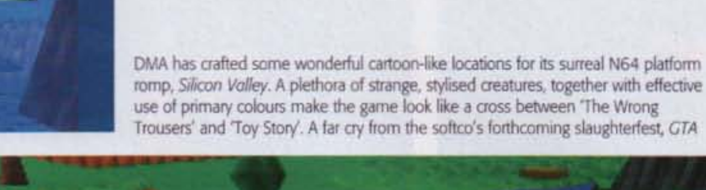


DID's latest combat flight sim, *TFX F22*, is both intricately realistic and visually stunning. The game employs a host of effects such as 3D clouds, night vision simulation and weather modelling to accentuate the authenticty of the flight experience. DID is also supporting various 3D accelerator cards to ensure that the lush, detailed landscapes do not compromise the speed of the game









DMA has crafted some wonderful cartoon-like locations for its surreal N64 platform romp, *Silicon Valley*. A plethora of strange, stylised creatures, together with effective use of primary colours make the game look like a cross between 'The Wrong Trousers' and 'Toy Story'. A far cry from the softco's forthcoming slaughterfest, *GTA*





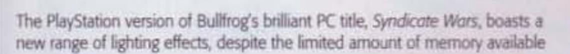


aircraft) is apparently very easy to learn to fly (but tough to master), and the scenery which rolls beneath is quite simply breathtaking.

Moving away from the seriousness of simulation and strategy, DMA is making gradual progress on its N64 3D platformer, *Silicon Valley*, which should be released by Christmas. The game, set on a space station overrun by strange hybrid creatures (see **E**41), boasts some interesting location designs as well as plenty of cutesy critters. Obviously, this is an attempt to produce a Miyamoto-style title, but the whole thing seems infused with the Caledonian company's standard-issue sinister humour. Rabbits with helicopter ears? Polar Bears with tank treads? It's the natural progression from suicidal rodents...



Another British company that excels in dark humour is Bullfrog, and its masterpiece of futuristic gangland anarchy, *Syndicate Wars*, is set to arrive on the PlayStation in June. Although certain compromises have had to be made in map terms (the PC version took eight megs as its target memory size, whereas the PlayStation boasts but two), there are many visual improvements. Coloured lighting, for example, now fills each level, as do peripheral effects like sparks from street lamps. The designers have also scaled ▶



The PlayStation version of Bullfrog's brilliant PC title, *Syndicate Wars*, boasts a new range of lighting effects, despite the limited amount of memory available







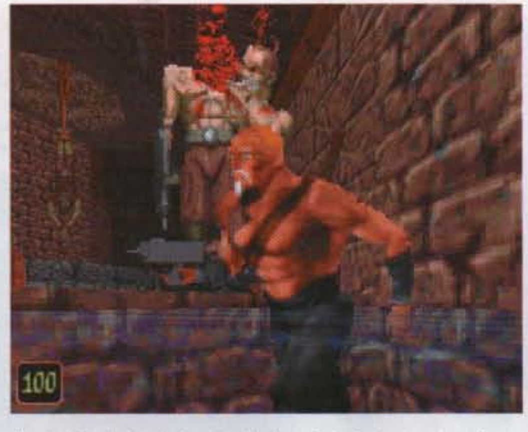
Sega has just released a version of its new Model 3 coin-op into its test site in Ikebukuro, Tokyo. The *Virtua Cop*-style game (above) does not yet have a name, but it offers gameplay seemingly based around 'Jurassic Park 2'. More next month











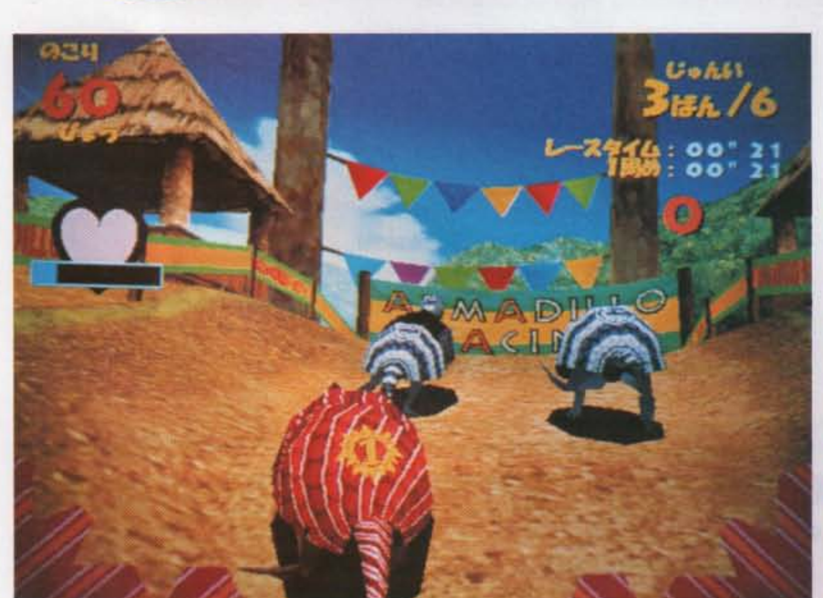


Shadow Warrior, the forthcoming title from *Duke Nukem* developer Apogee, is another first person shoot 'em up. Here the player takes on the role of 45-year-old martial arts expert, Lo Wang. Wang apparently makes humorous quips throughout the game. That's while he's blowing people's heads off

◀ down the tactical side of things, simplified the menu screens and brought combat to the fore, which should be enough to attract console owners who usually shy away from complex PC-type strategy games.

If violence is what they want, however, violence is what they can easily get. The rate at which first-person shoot 'em ups are produced does not seem to have slowed since *Wolfenstein* first reared its ugly VGA head several years ago, and this month sees two new titles ready to enter the fray: Apogee's *Master of Shadows* and *AD&D: Descent to Undermountain* from Interplay. The latter features a greatly expanded and enhanced version of Parallax Software's *Descent* engine. Set in TSR's Forgotten Realms universe, it combines a standard RPG quest (in this case, the player must search for – cue lightning, fanfare and deep booming voice – the flamesword of Lloth) within a frenzied first-person environment.

Along with the TSR license, *Descent to Undermountain* also boasts 20 dungeon-based levels, dozens of polygon monsters and a wealth of realtime lighting effects. The visuals certainly have improved since the *Descent* days: detailed and well-modelled creatures hobble about the screen and locations are much more graphically interesting. However, whereas *Descent* stood out due to its, at the time, unique 360-degree engine, it will be interesting to see how this title performs in a market now full to bursting with every shape and form of advanced 3D-driven games. **E**











In Namco's bizarre coin-op, *Armadillo Racing*, players control their scaley 'vehicles' with trackballs. Four participants can race at once







Capcom has just announced an enhanced version of its moderately popular *Street Fighter EX*. *SF EX Plus* (above, left) allows players to choose from the original's 15 characters from startup and introduces a new range of super combos to the mix, while offering new character clothing and redesigned, re-coloured backdrops





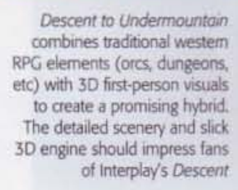


Square Soft's innovative PlayStation beat 'em up *Bushido Blade* has just reached Japanese shelves. The game presents large, multi-layered fighting arenas and interactive backgrounds (players can hack down bamboo, for example). Full review next issue





Descent to Undermountain combines traditional western RPG elements (orcs, dungeons, etc) with 3D first-person visuals to create a promising hybrid. The detailed scenery and slick 3D engine should impress fans of Interplay's *Descent*





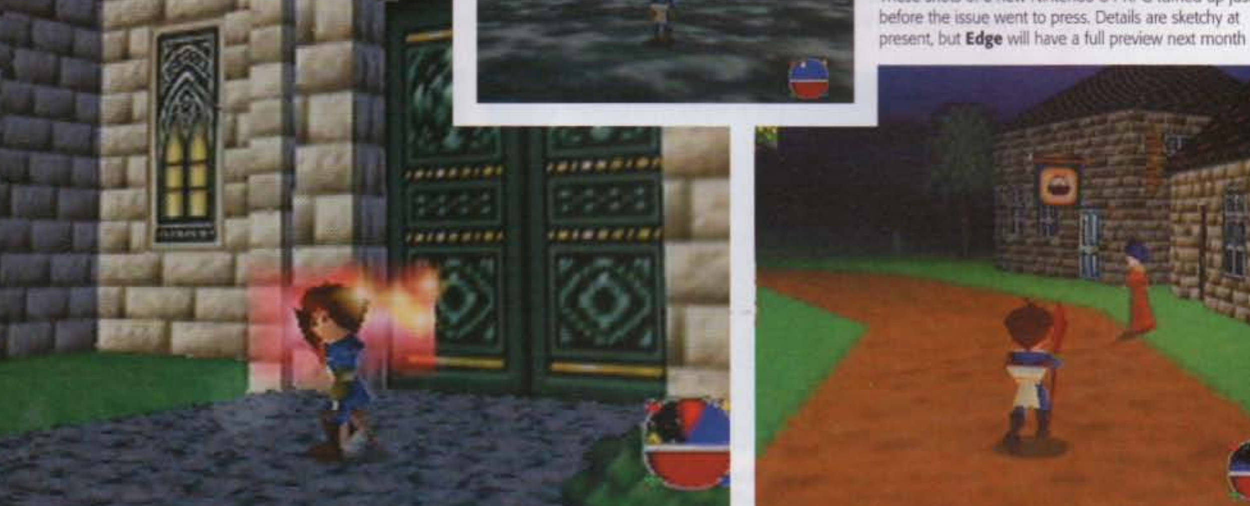








These shots of a new Nintendo 64 RPG turned up just before the issue went to press. Details are sketchy at present, but **Edge** will have a full preview next month



Team Apache

Veteran flight simulation developer Simis has embraced the new breed of 3D accelerators to make its latest recreation of airborne warfare its most explosive yet





The third campaign sees players working as part of a NATO force in Latvia (left), fighting what is effectively the Russian army, with the threat of sophisticated hardware offset by the enemy's poor morale. *Team Apache* pilots can expect lovingly depicted buildings (right) to topple over when hit

Simis' decision to abandon winged flight in favour of the complexities of helicopter aeronautics marks a change in direction for the veteran flight sim developer. But the ramifications of the move go further than that. Gameplay director **Lee Brimmicombe-Wood** says: 'I think this game will change the way flight sims are written.'

The innovation at the heart of the game is a convincing campaign system. Forsaking the threaded but isolated missions of other games' war modes, *Team Apache* uses a number of set pieces but works them into a system capable of depicting a constantly evolving battlefield. 'We're coming at campaigns from a completely different angle,' says Brimmicombe-Wood. 'We've created a dynamic, realtime campaign environment.'

The repercussions go much further than giving the player the opportunity to fly missions in day or night. 'Friendly and enemy units will be engaging each other, and the player has to make a contribution,' explains Brimmicombe-Wood. 'If the player takes out a critical unit at a critical time, they really can save the day.'

The sensation of playing within a believable war zone is further heightened





Shoot-outs between office blocks are perfectly feasible in the game, thanks to detailed landscape modelling assisted by 3D cards (left). The Columbian campaign (right) pits combined US and UN task forces against Marxist neo guerrillas

Format:	PC
Publisher:	Eidos
Developer:	Simis
Release:	August
Origin:	UK





'We don't just have vehicles in the game environment, we have infantry, too,' explains Brimmicombe-Wood. 'You'll be able to see men get out of a Chinook, attach a line to a downed Apache craft, then return to their own copter' (left)



Even the usually dull cockpit viewpoint looks impressive in *Apache* thanks to 3D cards

by the way the casualties of war remain in the gameworld.'If you blow the hell out of a unit, their remains will be there for the rest of the game. It makes things very satisfying,' enthuses Brimmicombe-Wood.

But the challenge of entering an ever-changing environment is only one of many difficulties facing the *Team Apache* pilot, because as the name suggests, this is a game that drops the 'lone pilot against the enemy' scenario in favour of an accurate recreation of the operating procedures and combat style of a real helicopter team. In the campaign modes, this even includes managing the maintenance crew.

'The resource management reflects the real wear and tear on the helicopters, the parts available, and the morale and abilities of the crew,' says Brimmicombe-Wood. 'Each of the co-pilots and gunners will actually have ratings affected by the missions, levels of fatigue and so on. The player can assess when pilots are demoralised or tired and even attempt to make them snap out of it, gently or more sternly. There's a very large man-management aspect.'

A simplified arcade-style control system will be available, as well as training levels and one-off missions to ease the novice in. But it's the full campaign mode which promises to make *Team Apache* a very different kind of combat simulation. Simis has even used the knowledge of Bryan Walker, a Gulf War Apache veteran, to maximise realism. He's been there, seen it done, it,' says Brimmicombe-Wood. 'It's been an immense help in getting *Team Apache* to look and feel authentic. I think we've got a nice balance between realistic handling, believable missions, realistic weapons, and an enjoyable game.'

Undoubtedly, the visual excellence of the game also contributes much to the feeling of immersion. Using the same 3D system as Simis' other forthcoming PC titles (such as *Terracide*), *Team Apache* makes full use of 3D accelerator support.

'It's an area we've been focusing on for the last few years,' says technical director **Jonathan Neuth**. 'We were slightly delayed by the arrival of Direct3D, but now we've worked to get the best possible performance using D3D's immediate mode. The 3D cards enable us to achieve greater realism, which really does add something tangible to the game.'

Supporting Microsoft's general-purpose system means that *Team Apache* can take advantage of all the D3D support offered by every 3D accelerator card, although Neuth also reckons that even software-only performance is equal to any other non-accelerated sim available.

Neuth again: 'High-level terrain effects have been done about as well as they can be by a number of other developers. But nobody has done a really effective low-level simulation before. With *Team Apache* you've even got helicopters fighting it out, flying behind buildings. We've been old guard up until now, insisting on running at 25fps rather than putting in textures. But what we can do now is have exceedingly high-quality immersive graphics and a high frame rate. You no longer have to sacrifice frame rate for quality. It allows us to be simulation freaks but also to make the visuals as realistic as possible.'



Battling against the Iraqis in Saudi Arabia, players must accustom themselves to longer distances, as well as more organised defenses

Hexen 2



Using an enhanced version of *Quake*'s engine, Raven Software is working on a *Hexen* sequel to die for, mixing role-playing influences with full-on blasting in some of the most intricate environments to date







The Golem (left) leaves *Quake*'s boxy monsters in the shade, while the colourful scenery affords *Hexen 2* greater realism

Raven has long been regarded as the poor man's id. Despite its success with Origin's *Shadowcaster*, and the *Heretic* sequel, *Hexen*, it's only now that the development house is beginning to show its true talents, thanks once again, to a collaboration with id.

Hexen 2 will be to *Quake* what *Heretic* was to *Doom*, taking what is essentially a shoot 'em up and adding a number of basic RPG elements to flesh it out. So strong was the original *Doom* that *Heretic* had trouble establishing itself as anything more than another imitation. However, with *Quake*'s oneplayer game being so weak, *Hexen 2* could easily turn out to be the better game. Raven's **Brian Raffel** outlines the differences between *Hexen* and its sequel: 'The major difference is that the environments feel real. We've added a number of effects to enhance the realism, such as rain, blowing leaves and the ability to smash through wooden doors and windows. It's almost as much

Format:	PC
Publisher:	Activision
Developer:	Raven Software
Release:	June
Origin:	US





All the windows and wooden doors in the game, even the most intricate (above), are destructible







The weapons in these shots may look a little familiar, as they're straight from *Quake*, as is the 3D engine, in a slightly enhanced form. Current consoles would struggle with this kind of detail

fun just running around smashing things up as it is hunting down monsters.'

The early version revealed to **Edge** has all the hallmarks of the *Hexen* epic, coupled with an enhanced *Quake* engine that allows for highly detailed interiors, including a church with pews, an altar and breakable stained-glass windows, private chambers with desks, books, candles and even a polygonal quill pen. Compared to *Quake*'s impressionistic approach (empty corridors and cavernous halls), Hexen 2 is much more detailed, and the textures exhibited by monsters suggest that a lot has been learned since id first posted *QuakeTest* on the Internet some ten months ago. All the creatures are polygon models, but the crude brown textures familiar to *Quake* are nowhere to be seen. One in particular, the gold Golem, stands out, with smooth, gold-effect skin and more complex geometry than id's Grunts.

The benefits of the latest *Quake* technology are clear to see, but as Raffel reveals, it's not without its problems. 'Having to learn an entirely new code base, level editor and art base really slowed the project down. That and the fact that we couldn't use any sprites to represent spider webs, banners or explosions, things that are quite tricky to do in a polygon environment. Flat sprites just don't look realistic enough.'

With full D3D support built in, and the same emphasis on interconnected game worlds and hubs, *Hexen 2* is likely to be one of the first post-*Quake* titles to really test the technology. Multiplayer options will also be supported, and if Raven can maintain the balance between role-playing and action, id may at last have some significant competition. **Edge** suspects that Epic, too, will be keeping a careful eye on *Hexen 2*...









The environments bear little resemblance to their *Quake* ancestors, with higher polygon counts and colourful, detailed textures. With a 3D card in place, this will look astonishing

Heavy Gear

Having lost its *Mechwarrior* license to Microprose, Activision is bringing a different kind of mobile-suit combat to the PC. And, with the aid of 3D cards, it's looking huge already...









Accelerated demos of Activision's *Mechwarrior 2* title have been bundled with just about every 3D card on the market. Impressive as they were, *Heavy Gear*, in its 3Dfx form (above) looks to be in a different league, thanks to a polygon count almost twice as large, and brand new landscapes

Format:	PC
Publisher:	Activision
Developer:	Inhouse
Release:	TBA
Origin:	US

Activision is not a company to rest on its laurels. Following the unfortunate loss of the *Mechwarrior* license to a FASA/Microprose alliance, the company has scoured the tabletop gaming market for a similarly popular prospect. It has come up with *Heavy Gear*, allegedly the fourth most popular RPG/wargame in the States. The deal gives the company exclusive worldwide rights to the games for at least ten years.

Heavy Gear is likely to be the first of many similarly themed games, and is currently being coded by the *Mechwarrior 2* team, which now boasts **Frank Evers**, who worked on the impressive *Earthsiege 2* (the only robot game to give *Mech 2* a run for its money) for rival codeshop Dynamix. Though the original pencil-and-paper game has RPG tones, the PC version will focus, not unsurprisingly, on combat. That's not to say that it won't be different, insists the game's producer, **Chacko Sonny**. 'The *Mechwarrior* games were combat based, sure,' he admits, 'but *Heavy Gear* will add a number of new elements to the gameplay. These robots



Though the cityscapes are still fairly basic, it's possible that interior firefights may appear in the game, which would be a neat twist



This kind of detail will only be possible with a 3D accelerator card. The realtime shadows and lighting effects look stunning



'The Gears' size and mobility allows for interior shoot-outs, taking cover, side-stepping and so on'

are a lot smaller than the Mechs, and their size and mobility allows for interior shoot-outs, taking cover, side-stepping and so on. They're a lot more human – they have a certain amount of character.'

There's certainly enough background material. The *Heavy Gear* universe has already been mapped out in great detail by the tabletop version's creators, Dream Pod 9, which should give Activision's new game a depth and continuity similar to that of the *Mechwarrior* series.

Heavy Gear will be 100% D3D compatible, straight out of the box. The *Mechwarrior 2* engine is still there, but has been significantly enhanced with higher polygon counts for the models (moving up from around 400 to at least 700) and hi-res textures. Such is the detail of the models and textures that Sonny believes the game may well have to be released as a two-CD set. The PowerVR version will also give the Gears realtime shadows, while the 3Dfx version will boast the now-obligatory bilinear filtering to smooth the textures.

Activision had a rough ride last year with the disappointing *Spycraft* and *Zork Nemesis* titles, and many regard its 3D robot licenses as its strongest suite.

With its evergreen theme of large-scale mobile-suit combat, *Heavy Gear* will no doubt be the closest thing the company has to a sure thing for '97. **E**







Heavy Gear's landscapes will feature polygon-based trees, as well as walls, rocks and hedges, to provide valuable cover during a firefight



The Gears are far more detailed than those of the *Mechwarrior* titles. Scenery will benefit greatly from bilinear filtering once implemented

Oddworld: Abe's Oddysee

Even though it's not in 3D, a new reworking of the *Flashback* genre may turn out to be an innovative 32bit gaming experience





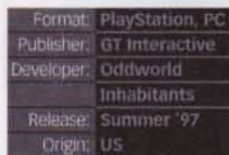




***Oddworld*'s visuals are especially rich thanks to its creators' background in computer graphics special effects. Behind such glorious-looking scenes lies fairly standard run-and-jump gameplay (above left), enriched with an original 'speech' system, which allows Abe to communicate with others**



Explosion effects look particularly impressive



Format:	PlayStation, PC
Publisher:	GT Interactive
Developer:	Oddworld Inhabitants
Release:	Summer '97
Origin:	US

One of the more unusual console games at the last E³, *Oddworld: Abe's Oddysee* was only revealed to a select few showgoers behind closed doors. Initially called *SoulStorm*, it has its sights set on the PlayStation's current platform champion, *Crash Bandicoot*, but seems to draw its inspiration from an older generation of more strictly 2D-styled platformers.

Developer Oddworld Inhabitants was co-founded in 1994 by **Lorne Lanning** and **Sherry McKenna**, who are its president and CEO respectively. Lanning's father worked as an engineer for console pioneer Colecovision, making him quite possibly the first ever second-generation games developer. He and McKenna were both enjoying lucrative careers as computer special effects animators until Lanning convinced McKenna that the new 32bit machines had the potential to take gameplay and graphics to new heights.

'What was most important to us,' Lanning explains, 'was to create new types of play mechanics with a conceptual story that you get attached to.' Starting







All manner of devices will appear throughout the game. In the typical platform adventure game style, making use of each will be vital





Having been in development for two-and-a-half years, *Oddworld* will have to pull more than just glorious graphics out of the bag to succeed



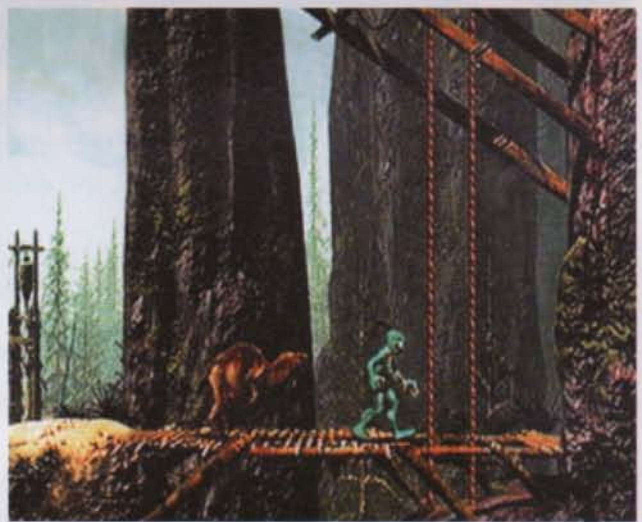

Abe could hardly be described as an appealing character

with the technical limitations of the PlayStation and Saturn in mind, they began work on their first game, based on Lanning's five-part story set on an alien planet, the eponymous Oddworld.

Abe's Oddysee puts the player in the role of Abe, a member of an Oddworld slave-race who works in a meat-packing plant. Abe accidentally discovers that his masters are using his race as foodstuff, initiating his eight-level adventure. The game is made up primarily of side-scrolling screens similar to *FlashBack*, with a total of 110 screens in the first level alone.

But, maintains Lanning, the *Flashback* comparison is misleading. 'There are a lot of situations in this game that are lifelike which makes it very different. You have to understand the characters' personalities and behaviours, not just the mechanics. Understanding the characters is how you're going to make progress further along in the world.'

It may be stretching a point to say that *Oddworld*'s characters are lifelike, but many of the game's quirky features are integral to the gameplay. For instance, Abe can tip-toe past sleeping enemies, and he has a chant power that enables him to take possession of the minds of enemy characters, whom he can then use to attack other foes.

Communicating with other characters will form an integral part of gameplay, although details of how this works are currently vague

Another new feature in *Oddworld* is a form of language that Lanning calls 'gamespeak'. Partially inspired by the audio puzzles of LucasArts' 1989 point-and-click adventure, *Loom*, it gives Abe a very basic vocabulary with which he can communicate with other characters. Using the directional pad, Abe can issue one of eight simple commands – phrases like 'Wait Here' and 'Follow Me'.

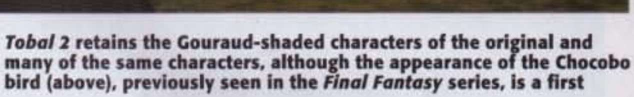
Two-and-a-half years after inception, the game has finally been properly unveiled because, Lanning explains, 'We wanted to have something to show before we started talking, to prove what we're playing with is real.' *Oddworld* should make for a refreshing change from the PlayStation's diet of polygon racers and beat 'em ups. It's certainly a daring move for a company to debut with such a deliberately retro platformer. E

Tobal 2

With both *Bushido Blade* and this follow-up to its hugely distinctive debut fighting game in the works, Square Soft is showing that it's taking the beat 'em up genre seriously







***Tobal 2* retains the Gouraud-shaded characters of the original and many of the same characters, although the appearance of the Chocobo bird (above), previously seen in the *Final Fantasy* series, is a first**



When *Tobal No.1* arrived in Japan last Autumn, it seemed that Square – purveyor of the sequel-spinning *Final Fantasy* series – had bitten off more than it could chew. In both gameplay and look, *Tobal No.1* was highly derivative, and its attempt to introduce an RPG-style element to the genre using a series of explorable 3D 'dungeons' was lightweight at best.

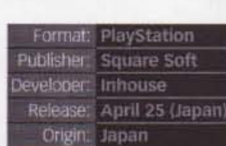
Square has designed *Tobal 2* with the PlayStation's new analogue controller in mind

Not deterred by *Tobal No.1*'s muted reception, Square is at work on a sequel which again features two modes of play – a standard one-on-one fighting mode and an RPG quest mode. In a marked departure from the first game, *Tobal 2* is designed with the PlayStation's new analogue controller in mind, and the quest mode follows the lead of *Mario 64* in that it's possible to move freely within a 360° world. Also, collectable items have been considerably beefed up with a far greater variety of objects on offer.

But it's the potential afforded by the analogue controller that sounds most enticing. The intensity of any given punch or kick is increased the more the stick is pushed, a feature which, if it works, could prove influential.

In a less groundbreaking twist, fighters will become slightly sluggish after taking a particularly intense blow, leaving them vulnerable to follow-up attacks.

Tobal 2 has some way to go if it hopes to match the benchmark titles of Namco and Sega, but Square's experimental approaches to the genre simply demand attention.



Format:	PlayStation
Publisher:	Square Soft
Developer:	Inhouse
Release:	April 25 (Japan)
Origin:	Japan





An impressive lightning bolt is charged up (left), then fired to devastating effect

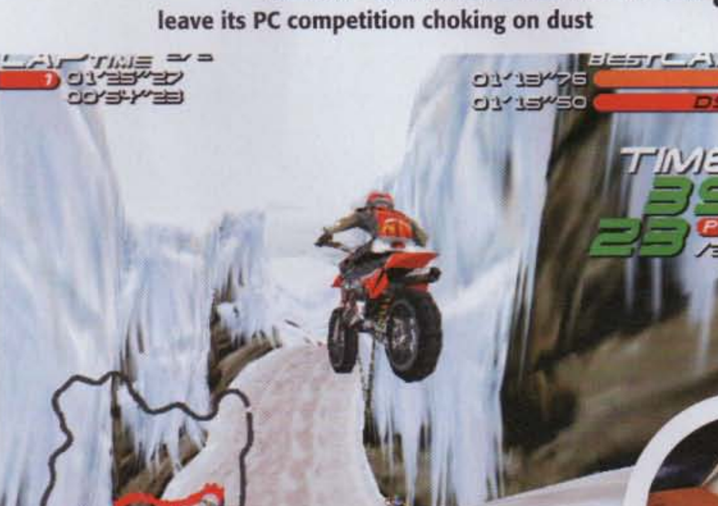
Moto Racer

Fade to Black developer Delphine is now working on something rather different – a full-on motorbike racing game that's primed to leave its PC competition choking on dust





Motorbike-racing game fans will fondly remember _Enduro Racer_ and _Super Hang On_ – _Motor Racer_ cribs ideas from both Sega games





Despite recent developments in technology, the PC has yet to prove itself as a platform for arcade-style racing games. Both *Screamer* and its sequel were picture-perfect impressions of what a coin-op racer should look like, but, like a picture, lacked the depth of the true experience. Even Sega failed to do its own arcade originals *Sega Rally* and *Daytona USA* true justice. Strange, then, that the most promising PC arcade-esque racing game to date should come from Delphine – a company which has never before strayed into the realms of either the arcade or the racing genre.

Moto Racer is, in fact, a motorcycle sim, so the French company is automatically stacking the odds against itself. Due to the complexity of transferring bike handling to home platforms, almost all games in this genre have failed. Here, though, the designers seem to have got the handling about right, combining the natural accessibility of a coin-op with the PC's tendency toward complex simulation.

Adding to this is the wide range of gameplay conditions. The nine courses on offer take in surfaces such as dirt, mud, snow and sand – each affecting bike handling in different ways. As demonstrated by Psygnosis' *F1*, weather is rarely simply a pointless, aesthetic addition, instead governing the way a course should be attempted.

Visually, too, everything is present and correct. Each circuit is well-designed and textured, and the bikes themselves are realistically drawn. Effects like realtime lighting also play a part: Delphine has included MMX compatibility and will hopefully dip generously into that particular pot of visual extras in order to enhance peripheral visual touches.

With features such as a multiplayer LAN option and various gameplay modes thrown in on top, *Moto Racer* could well prove that the PC and the racing game are not mutually exclusive, after all.

While Delphine may be new to the racing market, then, it looks set to show its PC-based competition how it should be done. On console, a forthcoming PlayStation conversion should be equally as promising.





The trial bike sections offer both country locations (top) and stadiums to race in

Format:	PC/PlayStation
Publisher:	Electronic Arts
Developer:	Delphine
Release:	April/May
Origin:	France



The superbike mode will obviously push Delphine's 3D engine to its limits. The demo Edge has seen is extremely swift



Sky Target

With a predecessor like *Afterburner*, *Sky Target* had a lot to live up to in the arcade. The home conversion should provide Sega with a chance to built on its merits and repair its flaws



Players choose from at least four craft: F-16 Falcon, Rafale, F-14 Tomcat and F-15 eagle











***Sky Target* features an impressively broad range of enemy fighters and background locations. This diversity is backed by some well-tuned gameplay and a selection of special weapons**



***Sky Target*'s aircraft are well-modelled and have convincing looks**

When the 32bit consoles first appeared, it looked as though the flight shoot 'em up would become a key genre. Sega's *Wing Arms* and Namco's *Air Combat* were both converted from the arcade within months of each other (prompting a brief splutter of imitations), but both lacked the brilliance required to hook home audiences. The genre subsequently drifted almost into disuse. By converting the second sequel to seminal coin-op *After Burner*, however, Sega is obviously hoping to revive interest.

The company may well succeed. *Sky Target* has proved a popular title in Japanese arcades, boasting a mix of impressive 3D visuals (rolling seascapes, rocky canyons, grass lands, etc) and a huge variety of enemy aircraft. There is also a healthy range of tactical features to give substance to a normally simplistic genre. The player's sights can lock on to some enemy aircraft immediately, for example, while others have to be targeted first – this prevents each enemy from becoming an instinctive and easy hit (as they often were in *Air Combat* and *Wing Arms*). Also, the game's impressive bosses – ranging from flying fortresses to intercontinental rockets – have to be destroyed within a certain time or they escape, costing valuable points.

On top of all this, there is a limited supply of missiles to bear in mind (players can call on a range of special weapons), and the fact that avoiding enemy fire calls for some highly dextrous flying.

Despite the intrinsic playability, however, there were problems with the arcade original. Slowdown often occurred when the screen filled with craft and a few graphical bugs existed due to a lack of processing power in the Model 2 board. The Saturn's twin processors have apparently cleaned up both of these misdemeanors, however, even allowing for a few extras – Saturn *Sky Target* should, for example, boast a greater choice of aircraft.

If the flight shoot 'em up *is* to return to the 32bit console scene, Sega's title could well lead the march.





***Sky Target*'s excellent end-of-level bosses (above) are among the game's key features**

Format:	Saturn
Publisher:	Sega
Developer:	Inhouse
Release:	TBA
Origin:	Japan





Kalisto

The French company once known as Atreid Concept has emerged from Mindscape's shadow

and is celebrating its rediscovered independence with a trio of new titles















Kalisto has a number of titles in its roster: the launch PowerVR title, *Ultimate Race* (top of page); *Dark Earth*, an epic adventure game for PC (above left); and PlayStation beat 'em up *Nightmare Creatures*, set in the foggy backstreets of Victorian London



Dark Earth eases the player into the action with a training level. The combat is well-crafted, although the emphasis here is on adventure





Like Square's recently released *Final Fantasy VII* for the PlayStation, *Dark Earth* features hi-res rendered backgrounds of the finest quality. Games such as *Alone in the Dark* are really only distant relatives

When **Nicolas Gaume** sold Atreid Concept to Mindscape in 1994, it was supposed to be the beginning of a beautiful friendship. Mindscape was in dire need of development talent and Atreid was desperate to expand. Mindscape moved in, changed the company's name to Mindscape Bordeaux and started work. Three years on, the marriage is over, and Atreid has emerged with a new name, Kalisto, three new titles, renewed self-confidence and some serious plans for expansion.

Gaume, a lapsed academic with boundless energy, an enthusiasm for games and a knack for picking team players with real talent, founded the firm in 1990. It created *Pac in Time* for the SNES and gained the honour of having the game released by Namco itself – the first time any developer outside Japan had been allowed to use the character. It didn't release another game until *Al Unser Jnr Arcade Racing* for Mindscape, a competent but inevitably sub-Crammond racing game. Its other brave attempt was *Warriors* for the PC, which tried to fuse *Virtua Fighter*-style polygon

Dark Earth is an epic science-fantasy adventure with stunning rendered backdrops and realtime characters

characters with prerendered scenery similar to that of the *Alone in the Dark* titles. But those were really just rehearsals. Ironically, Mindscape will not get to benefit from the main attractions, *Ultimate Race* and the forthcoming *Dark Earth* and *Nightmare Creatures*.

'After three years, we realised that we really had no future together,' sighs Gaume. 'The extra money had been useful, and there was a great deal of cultural and technical exchange, but there was also a huge amount of pressure from the parent company, Pearson, who had paid an extortionate amount for Mindscape and were looking to cut costs. There were many talented people at Mindscape, and we had a very useful two years with them, but in the event we felt that we were really just another one of the items on the corporate task list.'

And so they split. Gaume raised the money to buy back the company, replaced the Mindscape Bordeaux tag and set about creating the kind of environment he knew would lead to some great games.

Walking around the Kalisto offices in the business district of Bordeaux, it's evident that the emphasis has been placed firmly on nurturing team spirit and creativity rather than buying fancy desks, conference phones or wall-to-wall shag-pile carpets. It's dark, maze-like, and cluttered; faces are lost in the gloom, and programmers and designers sit huddled around each other's screens as if for warmth.

The biggest room is occupied by the most ambitious project. *Dark Earth* is an epic science-fantasy adventure for the PC, with stunning rendered backdrops and realtime 3D characters. The 20-strong team currently bringing it to life is headed by a former games journalist, **Guillaume Le Pennec**, who believes that it could be the start of something really big.

'With this game, we are creating an entire world, with its own people, its own history and its own mythos,' he gushes. 'Before we could start on the game, we spent months and months working on the background, making it wholly believable, making sure the continuity was there, and drawing all the threads together.'

The design document for the game could sink a battleship, covering everything from the myriad races that inhabit *Dark Earth* to its flora and fauna. The plot is equally weighty. The central premise is that Earth, following a catastrophic meteor storm, has become shrouded in a great cloud of dust that has blocked out the sun and covered the continents in great sheets of ice. Humankind gathers in great citadels for protection from the strange, demonic creatures called 'Stallites' which lurk on the tundra and spring up wherever the sun breaks through the cloud. An entire religion has evolved to explain the perpetual night, presided over by the Sunseers. The player's character, Arkan, is wounded while guarding the seers and infected with a virus. The game then becomes a tense race against the clock to find a cure before it's too late, and to discover the secret behind the apocalyptic meteor storm.

Dark Earth is an impressive piece of software in a number of ways. The backgrounds have all been rendered on SGIs and are of a similar quality to those of Square's *Final Fantasy VII*. The plot gives rise to a style that blends bronze machinery, guns and technology with medieval swords'n'sorcery imagery. There are some 250 screens to explore (Infogrames' *Alone in the Dark* had only 50), all rendered in *Softimage* and *3D Studio*. The result is





Although it may closely resemble previous French titles *Alone in the Dark* and *Timegate*, *Dark Earth* is a generational leap beyond both

that it looks every inch like the kind of game the disappointing *Timegate*, from Infogrames, should really have been. Although the team is justifiably proud of the visual flair of the title, Le Pennec is keen to emphasise that the most crucial aspect of designing an adventure is the play-balancing.

'If you don't get that right, you may as well forget it. We don't want to be creating games for specialists; we want to make games that have a broad appeal, in the same way that films do. The problem with games like *Resident Evil* and *Bioforge*, although they are great titles, is that they put too much emphasis on combat, with no character interaction – it's just kill, kill, kill. We're trying to create something with infinitely more depth.'

Playing the beta version proves that Kalisto is on the right track. Although the speech is in French, it's already obvious that *Dark Earth* has a lot more to offer than pretty visuals and fight scenes. There are more than 95 different characters, and all can be attacked, befriended, questioned or completely ignored. Spot animations bring the rendered scenes to life, the detailed textures on the character models give each one its own personality, and the smooth animation suggests a degree of polish more commonly associated with adventure veteran Delphine. If the game is a success, Kalisto may well find itself competing with its heroes, including *LBA* creators Adeline. Le Pennec is a huge *Alone in the Dark* fan, and he'd be delighted if his team could be credited with taking the genre further.

Although most of Kalisto's resources are currently focused on bringing this ambitious project to life, it is by no means its only hope. Gaume realised in 1990 that 3D games were the future and set about building a universal 3D code library – an engine that could be adapted to almost any genre. Entitled Libsys, the technology is constantly evolving, and from the outset has been largely structured around *Windows* and the Mac. Predicting that *Windows* would eventually become a gaming standard must have seemed like a pretty big bet in 1990, when DOS games were only just beginning to find their feet. Gaume is pleased that he backed the right horse, but he doesn't see himself as a visionary.

'All I would say is that, at the time, it was obviously a very big gamble for us to be thinking in those terms, when the rest of the industry was full-

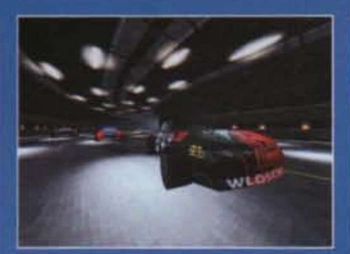






Nicolas Gaume, Kalisto's enthusiastic president, waxes lyrical on everything from his misspent youth to the benefits of independence

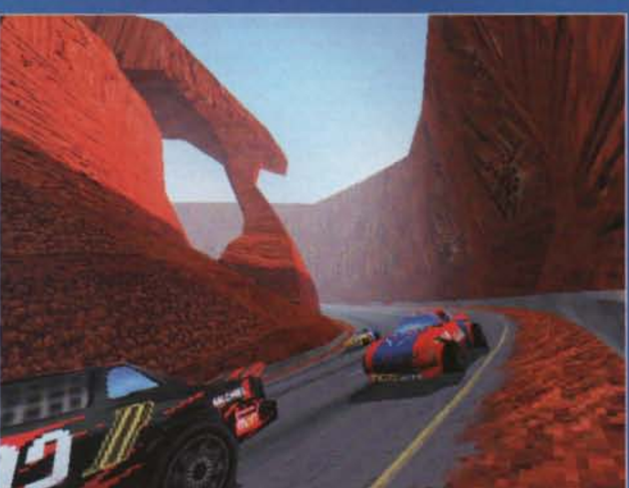






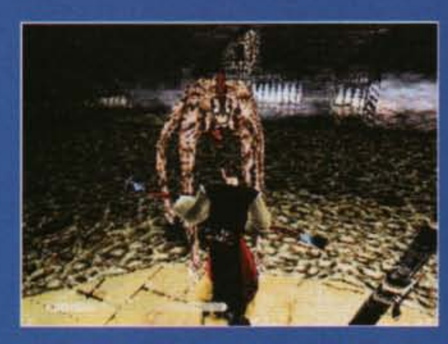








PowerVR title *Ultimate Race* is currently the best-looking racing game available for the PC. It runs in hi-colour at over 25fps, and features realtime shadows, lens flare, hi-res texturing and some superb arcade-quality scenery. Importantly, another version is due soon, with extra tracks and cars





In contrast to *Dark Earth*, PlayStation beat 'em up *Nightmare Creatures* is pure action, with only minimal puzzle elements. Project leader Cyrille Fontaine describes it as more like a 3D *Double Dragon* than *Tomb Raider*, despite the graphical similarities that might exist between the two titles

steam ahead with DOS. We didn't ignore DOS, obviously, but in developing Libsys, we assumed that one day code would be 32bit and that it would have to run under *Windows*, and we were right. We didn't, unfortunately, predict the rise of the PlayStation!'

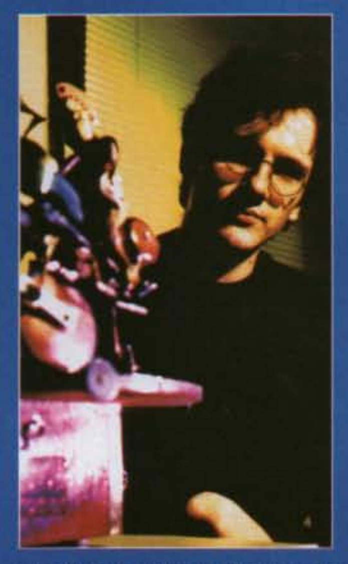
They may not have predicted the rise of PC 3D cards either, but they're nevertheless one of the first developers to get to grips with VideoLogic's PowerVR technology, via *Ultimate Race*. *Race* was developed using the Libsys libraries, and on the evidence provided by the title, Kalisto seems perfectly prepared for the PC's emergence as a serious games machine. Although only currently available as a pack-in bundle, the game is an incredible achievement. It runs comfortably between 25 and 30fps in 640x480, and features lens flare, minimal scenery pop-up and some amazingly detailed scenery. In fact, *Ultimate Race* suggests that arcade titles such as the 3Dfx-powered *San Francisco Rush* are only a year away from being possible on the humble PC.

However, Libsys has been sidelined in favour of development on the imminent PlayStation action title, *Nightmare Creatures*. The project leader is **Cyrille Fontaine**, and he's not an easy man to find in the half-light of the Kalisto building. The cramped office space occupied by the team is filled with PlayStations, comics and clutter, and the ambient light of the monitors throws everyone into suitably nightmarish relief. Fontaine seems weary as he bemoans the fact that his beloved Libsys could not help them with the game.

'We really are forced by Sony to use their own libraries,' he admits. 'That's okay, but Kalisto has spent years working on a number of excellent 3D libraries that would have made things much easier. Luckily, at this stage it's not really a problem, because the PlayStation really is ideal for fighting games. The only real problem we had with it was that we started work on the game almost two years ago, and at that time we weren't sure how powerful, or not, the console would be. We thought it would be a little bit faster than it is, but we've managed to work around it.'

Although it initially bears all the hallmarks of a *Tomb Raider* clone, *Nightmare Creatures* is a straight 3D scrolling beat 'em up. Fontaine compares *Tomb Raider* to a '3D *Prince of Persia*,' and defines *Nightmare Creatures* as a '3D *Double Dragon*'. Like *Tomb Raider*, however, players can elect to play as a female character, fighting their way through 15 levels of old London town – superbly recreated in realtime with light sourcing, transparent fog effects and some truly gruesome-looking opponents. Some leap out at the player from behind gravestones and walls, others swoop down from the skies and some attack in small groups, like 'raptors. 'Atmospheric' is the operative word here.

Mindscape will no doubt kick itself when these titles see the light of day. Each one looks extremely promising, and as a company, Kalisto possesses a level of enthusiasm and creativity that would be the envy of many developers. If it can maintain the momentum, finish *Dark Earth* and score a hit on the PlayStation, then the future looks bright indeed for Nicolas Gaume and his team.




Both *Dark Earth*'s Guillaume Le Pennec (left) and *Nightmare Creatures*' Cyrille Fontaine (right) have an eye for atmosphere




The smooth, detailed environments of *Nightmare Creatures* are comparable to Core's groundbreaking *Tomb Raider*. The intelligent camera automatically zooms out to give the player the best view of the game's 15 different monsters









Treasure

The nature of the Nintendo 64's hardware instantly brings to mind vivid 3D worlds, but a small Japanese developer is breaking the rules by making its first 64bit game a distinctly two-dimensional affair – albeit a rich and action-packed one





Nestling in the heart of Shinjuku's infamous electronics district is a small developer with a world-class reputation. Treasure is the creator of acclaimed console titles such as *Gunstar Heroes*, *Dynamite Heady* and most recently, the oddly RPG-infused Saturn beat 'em up, *Guardian Heroes*. **Edge** is here to meet the president and CEO of Treasure, **Masato Maegawa**, and Enix's **Yuchi Kikumoto**, and to see the work being undertaken on Nintendo 64 title *Yuke Yuke Trouble Makers* (aka *Go Go Trouble Makers*). Enix is present because it is publishing the game despite the company's newly-cemented allegiance with Sony through its forthcoming *Dragon Quest VII* (recently at the centre of controversy in Japan because of the series' historical link with the Nintendo brand).

Masato Maegawa is a lively character, hammering out words at the same blistering rate as firepower spews from characters' weaponry in his company's action-led games. He explains how Treasure was created five years ago and founded on a vision 'just to create great games,' describing how this vision flew in the face of corporate Japanese publishing where few risks are taken and 'certain rules' must to be strictly adhered to. This desire for personal autonomy rose from years working under such a regime – many of Treasure's core employees (including Maegawa-san) previously worked for Konami.

Maegawa-san graduated from university eight years ago and immediately joined Konami as a programmer. It was here that he programmed the Game Boy version of *Dracula Densetsu* (*Castlevania*), a game he is quick to point out was 'not very good' – true in some respects, but given that the game found its way into more than two million Nintendo handhelds worldwide, an example of Japanese modesty. The SNES classic *Castlevania IV* is another title that Treasure's staff played a part in.

But it was rival16bit technology – Sega's Mega Drive – that the company chose when it first started out. After completing *Gunstar Heroes* – regarded by many as one of the definitive 16bit action games – Treasure went on to create other highly regarded Mega Drive titles such as *Yuyu Hakusho*, *Dynamite Heady*, *Alien Soldier* and *Light Crusader*. Now, though, it has turned its attention back to the Nintendo, and naturally its N64 technology.





Yuke Yuke Troublemakers **is one of the most original N64 titles to date inasmuch as it shuns polygons in favour of sprites. The result is a game which harks back to classic 16bit**

Treasure started work on *Yuke Yuke* almost two years ago. At the time the N64's chipset wasn't even finished and a lot of guesswork was needed to form the early design concepts. Little was known about the machine's polygon handling, other than the fact that pixel quality would be higher than that of the Saturn and PlayStation. And development tools either weren't ready or were undergoing constant revisions – a situation not uncommon to any hardware launch. The resulting game is shot through with the same desire to delight that infused Treasure's previous essays in platform gaming, but takes full advantage of the N64's hardware to create some of *Yuke Yuke*'s most impressive effects. **Edge** quizzed Maegawa-san and Kikumoto-san regarding the development of a title whose themes were thought long forgotten but which full-on action game fans will no doubt be ecstatic to see being resurrected...

Edge: Treasure has long been a loyal Sega developer, so why the sudden switch to Nintendo?
Masato Maegawa: It's difficult to explain... Simply, we heard about the machine and were very interested in developing for it. I suppose we were

'Enix basically hunts for brilliant developers. Treasure is famous for action games, so we got together'

just curious. In fact, when we were working on the Mega Drive, Nintendo was dominating the market but despite this we chose the Mega Drive, which was easier to develop for. For *YYTM*, we did not consciously choose Nintendo – our choice was based on the functionality of the hardware.
Edge: And why did Enix decide to work with Treasure?
Yuchi Kikumoto: Enix has no internal development and we basically hunt for brilliant developers and contract with them. Treasure is famous for action games, so we wanted to try at least one time with them...
MM: Personally, I have a lot of time for Enix [laughs]. In fact, when I was a student I had an interview with them. I wasn't chosen, though... [laughs].
YK: [Surprised] I didn't know that...
MM: In fact, I have very good memories of Enix at that time and since then, we have been asked a few times to develop for Enix. Two years ago, we chose to develop on the N64 and thought it would be a good idea to do it with Enix.
Edge: How many staff worked on the *Yuke Yuke* project? Was the game created by the same team as *Guardian Heroes* and *Gunstar Heroes*?
MM: No, the teams are different, but all our games have shared staff at certain times. The main programmer of *YYTM* is the same programmer that coded *Gunstar Heroes*. The character designer also designed the characters of *Gunstar Heroes* and *Guardian Heroes*. Basically, the team wasn't fixed as such, but I guess we had a maximum of 15 staff working on the game with an average of 12 all along the development.
Edge: Was there anything you wanted to do in *YYTM* that wasn't possible?
MM: No, not really. We wanted to make something different from *Gunstar Heroes*. In that game, the player basically just has to shoot everything. This made the game interesting and very enjoyable but *YYTM* is different and we focused on researching a gameplay feature unique to the title. We found the 'catching' feature worked well and making this work so that it was enjoyable was perhaps the most difficult thing to do.
Edge: How are you finding development on the N64? How does it compare to working on the Saturn or Mega Drive?
MM: When we started, the environment was not ready, so it was very difficult for us. Cartridge- and CD-ROM-based machines cannot be programmed in the same way. Cartridges have their advantages and disadvantages. It has the benefit of being able to load data instantly but obviously it would be better to have cartridges at the same price as CD-ROMs. Of course, for action or fighting games cartridges are much more convenient, but it's only a question of getting used to develop on the N64.
Edge: Did you use any special hardware techniques with *YYTM*?
MM: No, not really, but we worked especially hard on a particular boss. The game is essentially 2D but this boss was created in 3D. We had to link small, individual parts of the boss to make it move realistically. We also had to play with the lighting effects... For this boss the programmer did a great job. You could say we used the know-how we've acquired over the years.
Edge: Is the N64 an easy platform to develop on?
MM: It is pretty difficult. Compared to the Saturn I think it's more difficult. But after making one piece of software for the N64 you get used to it and it no longer becomes a problem. ▶



Treasure's Masato Maegawa presides over one of the smallest but most dynamic and exciting development teams in the world today





***Yuke Yuke Trouble Makers* may be primarily a 2D game but Treasure is justly proud of its impressive 3D special effects, best seen in the game's bosses such as this one (left). The game's robotic heroine, Marina, has a great number of joints which give her very smooth, fluid movements**

Edge: What is your relationship like with Nintendo? Are your two companies close to them – does NCL maintain a lot of control over Nintendo software development at Treasure?

MM: We don't have a special relationship with the company as such, but Nintendo provided good development support and the staff there have been very helpful.

Edge: Are there any other game designers or programmers whose work you particularly admire?

MM: Shigeru Miyamoto, naturally, because he makes such great action games. I really think he's a god as far as games development goes. In the RPG scene, I really rate **Yuji Horii**, the creator of *Dragon Quest*.

Edge: What do you feel are the most important things to consider during the developing of a game?

'I admire Shigeru Miyamoto, naturally. I think he's a god as far as game development goes'

MM: Planning is the most important thing to us; we decide everything during the planning phase. Otherwise, development would be too difficult.

Edge: What kind of games do the teams like?

MM: Personally, I like the *Mario* games. It's difficult to speak for the other staff but I know that the main programmer likes *Virtua Fighter*, for example.

Edge: Do you want to make games other than the action-based variety?

MM: Yes, of course we'd like to do other types of games. First we want to make the type of games we're strong at, but we still want to make games in different genres in the future.

Edge: As a company, do you feel that Treasure is any different from other Japanese videogame developers?

MM: Lots of people here like foreign games, but I do not think our games have a particularly foreign, non-Japanese look – their design is also suitable for Japanese tastes. For RPGs, it's a different story – for them, the story plays an important part in making the game interesting and each country naturally has its own particular points of interest. But for action games, it's the same the world over…



Yuchi Kikumoto is section chief in Enix's software planning department, and is closely linked to the development of *Yuke Yuke*

Treasure's treasures







Masato Maegawa and many of his colleagues at Treasure may have wanted to break free from Konami's yoke, but most of the company's games to date owe a debt to the years its staff spent toiling on games such as the classic SNES shoot 'em up, *Super Contra III*.

While the company has dabbled with an isometric 3D viewpoint in *Light Crusader* (above right), the majority of its games, including *Dynamite Heady* (above left) and *Alien Soldier* (main), are fast-paced, colour-drenched, and packed with special effects.

Yuke Yuke Trouble Makers is infused with the same desire to delight and, while remaining a markedly 2D affair, it takes full advantage of the N64's hardware to give the game a 3D solidity, much like the forthcoming *Yoshi's Island 64* (and, indeed, the Super FX-powered SNES title, *Yoshi's Island*).

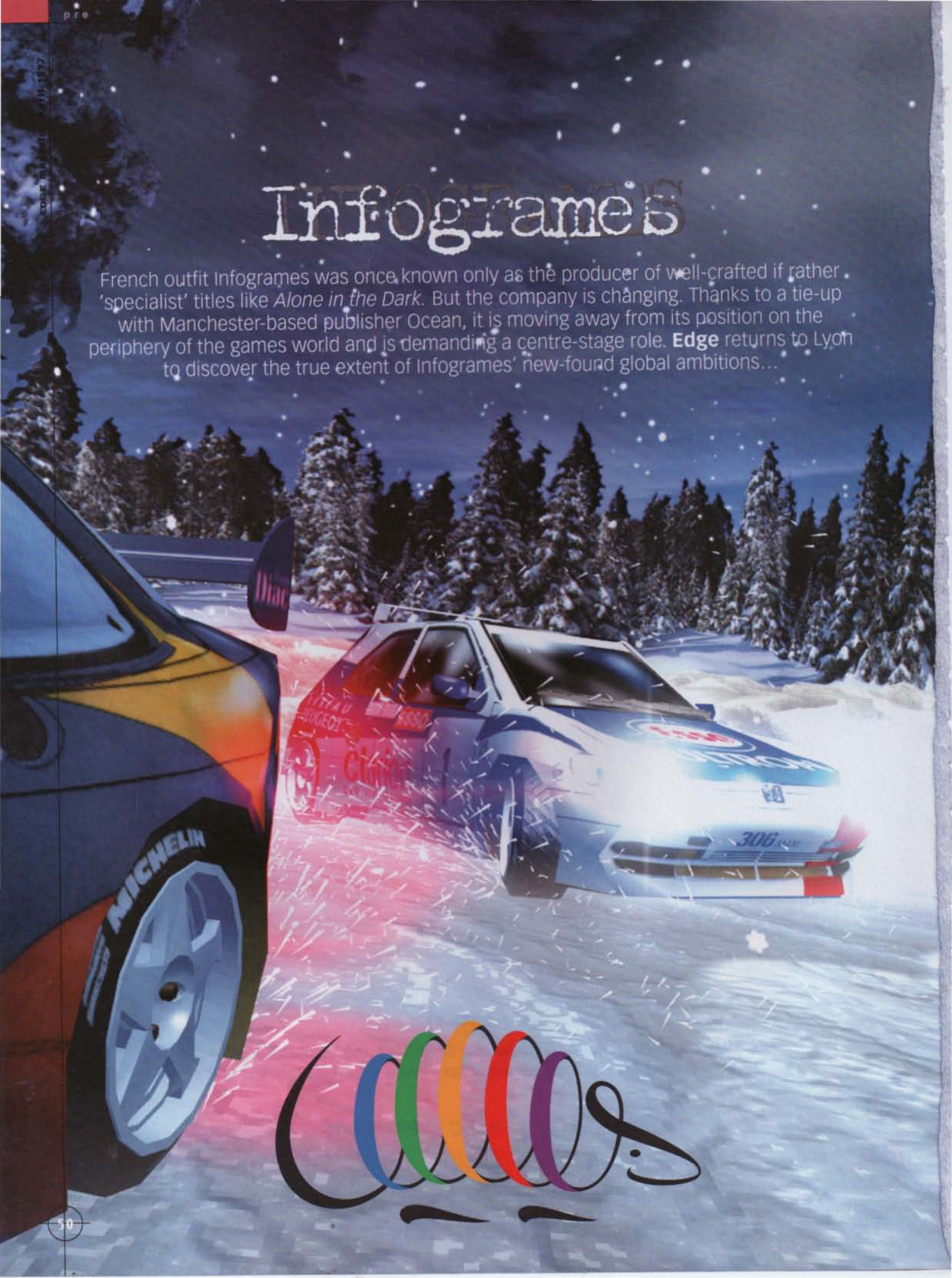
The player's character has three main actions – catch, shake and throw – which they can use on the different objects, enemies, weapons and traps they encounter. Thus, players will have to catch an object then choose whether the shake it or throw it – there's no blasting or hitting in the game. The inhabitants of the game world can therefore be picked up and either tossed at another enemy or shook to make them drop whatever they're carrying. Alternatively, they can be held onto and used as a human shield against laser and missile fire.

As well as collecting and using objects, the player will also be able to interact with non-player characters (whose voices are provided by famous Japanese actors and actresses) and pick up clues for later use.

Yuke Yuke Trouble Makers is a daringly different Nintendo 64 title, not merely a 2D platformer but one which is attempting to push back the boundaries of what is possible in this most antiquated of genres. Whether Treasure's talents in the 64bit field will match its obvious ambition will become clear when the game appears in a few months' time.

Infogrames

French outfit Infogrames was once known only as the producer of well-crafted if rather 'specialist' titles like *Alone in the Dark*. But the company is changing. Thanks to a tie-up with Manchester-based publisher Ocean, it is moving away from its position on the periphery of the games world and is demanding a centre-stage role. **Edge** returns to Lyon to discover the true extent of Infogrames' new-found global ambitions...





The French town of Lyon is the spitting image of the towns used for all the stock photography in French language textbooks. It's got small cafés, shuttered buildings, and drivers who think that a red light means 'select target'. People saunter about, smoking cigarettes and sipping black coffee. There's a certain air of, how shall we put it, 'laissez-faire'. Everywhere, that is, but in the concrete tower block that dominates the rue du 1er Mars 1943.

Behind the ragged vinyl shutters (hung, oddly, on the outside of the windows) lives Infogrames, and everyone in that building is working as fast and as hard as they can to secure international success for a company that has, until recently, been a strictly European creature. However, a recent merger with British veteran Ocean has given it global ambitions that include a worldwide multimedia arm, television interests and, of course, videogames. Most UK gamers will only be familiar with Infogrames' PC software, in particular the groundbreaking *Alone in The Dark* titles created by French codeshop Adeline, but that relationship ended, somewhat acrimoniously, some time ago. Infogrames is now looking for a new direction that sees it embracing the PC, PlayStation and Nintendo 64.

Things look considerably more cheerful inside the building than outside. Giant cardboard cut-outs of game characters litter the hallways – including a huge Tin-Tin, an oversized Smurf (from the SNES title) and, unsurprisingly, Asterix and Obelix. It's not difficult to see why Ocean seemed such a sweet deal. After all, it's not easy to be taken seriously in the world market when all your games are so distinctly 'European', and either cutesy platformers or slow-moving adventures. Ocean has spent the last year recruiting quality developers, such as Neon, and nurturing its internal development team, Tribe, which is producing a number of action titles – a genre Infogrames has long been eager to explore. The first break from tradition will be PlayStation racing title *V-Rally*, developed within the colourful confines of the Lyon office.

There's been something of a buzz surrounding this game since it was first announced only two months ago. The leak of what appeared to be hi-res screenshots suggested a real breakthrough in PlayStation technology – a rumour that gained more weight when it was announced that the team responsible had bypassed Sony's libraries and written directly to the chip. **Edge** printed the shots in PreScreen Alphas and was eager to get to grips with the real thing.

V-Rally, as it happens, does not use a hi-res mode. It is, however, extremely quick. 'For *Rally*, we found that the Sony libraries were simply too slow to afford us the level of speed and realism that we needed,' explains *Rally* producer **Stefen Baudet**. 'Basically, we simply left out any library data that slowed the frame rates or limited the detail, and programmed directly to the PlayStation GPU and GTE processors in machine code.'

The alpha version that **Edge** toyed with is easily as fast as anything yet seen on Sony's machine, including the rough-hewn but expansive *Rage Racer*. The courses – a daunting 45 of them – vary from jungle terrains, deserts, townscapes and the obligatory mountain passes, spread over three geographical areas – Africa, England and Corsica. The vehicles include officially licensed models from Renault, Mitsubishi, Lancia, Peugeot, Seat, Nissan and Ford, as well as a number of hidden cars. The team has incorporated weather effects such as rain and snow, in addition to night and day cycles and 3D stereo sound. Pop-up is minimal, although everyone in the test room seems keen to point out that it's yet to be optimised. The familiar PlayStation glitches are still present (white break-up lines mysteriously appear from time to time), and the car dynamics are far from perfect, but as Baudet points out, the game is still under construction.

The alpha version of *V-Rally* that Edge toyed with is easily as fast as anything yet seen on Sony's machine

'There are very few racing games out there that actually use true car dynamics,' he argues. 'We looked at every title we could get our hands on, and realised that almost none of them bear any resemblance to the way a real car would handle. There were a few exceptions, notably Psygnosis' *Formula 1*, *GP2* from MicroProse, *Sega Rally* in parts, and perhaps *Screamer 2*, but that's a relatively small number. The one thing they have in common, as well as true modelling, is that they're all considered to be superb games. It's vital to get the handling right.'

To supplement the advanced dynamics, *V-Rally* incorporates three different control modes, from Beginner to Expert, with the realism increasing with each level. In Expert, all the precise forces that act upon a vehicle are taken into account and the car becomes almost impossible to control (let's hope that it doesn't become so real that it's unplayable).

Ari Vatanen, winner of both the Paris-Dakar and the World Rally Championships and special advisor on the project, playtests the game on a weekly basis to ensure that the realism and fun of rallying remain balanced. If anyone should know about car dynamics, it's him. However, when **Edge** arrives, Vatanen is ▶





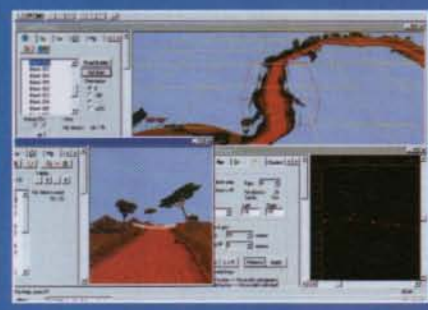






V-Rally **is something of a departure for Infogrames, a company more traditionally associated with the *Alone in the Dark* adventures and multimedia titles. The game moves incredibly quickly**





Former rally champion Ari Vatanen (right in photo) was drafted in to provide an expert opinion on *V-Rally*'s car handling and to advise the team on the most realistic and fun track designs

nowhere to be seen, having rolled his car four times over while rallying in Italy at the weekend.

The general feeling at Infogrames is that *V-Rally* will be a real breakthrough, and indeed, **Edge** was impressed with the smoothness of the engine. Baudet himself, a stickler for detail, is supremely confident. 'We're determined to get the most from the PlayStation in terms of speed,' he declares. 'We spent years working on the 16bit consoles, in 2D environments with games running at 50-60fps, so we're not used to seeing our games running slowly. The PC, for example, has games such as *GP2*, which have lowered people's expectations, but we believe that if you drop below 30fps you significantly reduce the playability of a game, which is why *V-Rally* never drops below that level, regardless of the number of cars onscreen.'

Brave words, but that's a pretty tall order. Even on a 200MHz MMX PC, **Edge** has seen many a racing game slow dramatically when other cars appear on the scene. So how does Infogrames intend to overcome this seemingly insurmountable problem?

'With a watchdog,' Baudet replies, mysteriously. 'We've built in a kind of watchdog program that monitors the frame rate. It checks the delay between the CPU and the GPU and if it discovers on one frame that it's getting close to the limit, then it just leaves a few elements out of the next frame until the timing is fixed. By calculating on a frame-by-frame basis, it's extremely responsive and economical, so the player will probably never notice the drop in detail between the frames.'

Baudet's pet hate is racing games with only one track, like *Ridge Racer*. *V-Rally*'s 45 tracks may sound like overkill, but many of them are the same tracks with different weather conditions or seen at night. However, Baudet's team has created a track generator which allows the player to set several parameters, such as number of elevations, stage size, difficulty, terrain, weather and time of day. The game then generates a random track design, which can be discarded, used, or saved to a PlayStation memory card (with each track occupying just one slot).

Quite apart from the technical achievements, *V-Rally* is interesting for the story of its conception. As Baudet explains, *V-Rally* was initially designed as a Formula 1 simulator, until Infogrames discovered that it wasn't the only company bidding for the licence.

'We had a couple of problems,' he confesses. '*Rally* was originally intended to be an F1 game, but first of all, the F1 organisation forgot to mention that the licence was available to a number of companies and, obviously, you lose the exclusivity if there are ten other "officially licensed" games out there. Secondly, Sony neglected to inform us that Psygnosis had the licence too, and that their game would be out before ours. We felt that there was a conflict of interest, so we looked at what we had achieved with the basic engine, and decided to make a rally game instead.'

V-Rally will

be the first of the new Infogrames games to see the light of day, but there are a number of other projects currently in production, many of which are being kept under wraps (a Nintendo 64 title is mooted). *Space Circus*, for the PC, is the one with the most potential, although it's still nowhere near completion. As **Edge** makes its way through day-glo corridors towards the *Space Circus* team, the atmosphere changes, from an open welcome to open suspicion. Programmers in spectacles dodge past, people stare from behind half-open blinds and the *Space Circus* team themselves obviously don't welcome the intrusion. Understandable, perhaps, when they're sitting on what could be one of the biggest games of the year.

***Space Circus* is exciting not just for its smoothness and the depth of its 3D environments, but for its level of interaction**

Onscreen, *Space Circus* runs at 30fps, using all the tricks that the 3Dfx card has to offer: the sun blinds with its glare as Starshot, the hero, a spritely elfin figure, runs, jumps and cartwheels around the 3D environment. It's not often a game can be compared game to *Mario 64*, but *Space Circus* looks as if it's the closest PC owners will get to the Nintendo classic.

Space Circus is exciting not just for its smoothness and the depth of its 3D environments, but for its level of interaction. Starshot can talk to many of the characters he meets ingame and has to spend his time seeking out new aliens for the travelling 'Space Circus' of the title. The gameplay aims to strike a balance between the platform antics of *Mario 64* and the plot-driven evolution of *Zelda*.

Not all of Infogrames' games will be produced inhouse, though. The company has always prided itself on nurturing external development, and the new ties with Ocean have brought a number of new challenges for the management and production teams. **Eric Mottet** is the vice president of production at Infogrames in Lyon, though he's rarely in his office. Instead, he spends most of his time in California, Manchester, Paris or Brussels, heading up the Development Support Group. It may sound like a variation on Alcoholics





Anonymous, but in all seriousness, the group is there to ensure that technology and resources are shared between the development teams to the mutual benefit of all.

'The idea behind the Development Support Group is that the common links between projects, such as 3D engines, code libraries and techniques, can be shared between all the developers, both internal and external,' Mottet explains. 'It doesn't mean that people are stealing each other's ideas, but it does speed up the development process. We also have a dedicated technical team responsible for programming and refining 3D routines, exploring new ways to take advantage of the various platforms, and staying in touch with all the latest technological developments.'

Mottet also spends a great deal of time liaising with the developers and ensuring that each project is proceeding according to plan. This is no easy task with the teams spread so far apart. There's the Ocean office in San José, currently working on *Mission: Impossible* for the N64; the Paris group, which is tied up with the forthcoming sports range; and the Manchester teams, which are dealing with the Tribe games.

There's also

Neon in Frankfurt and Appeal in Belgium, the latter team being the current stars in the Infogrames firmament. The team is putting the finishing touches to *No Respect*, an arena-based combat game, and is also in the thick of development on the outstanding PC action adventure, *Outcast*. A small team based in Jambes, a sleepy town about an hour's drive from Brussels, Appeal has a rich history, although it is virtually unknown in the PC world. The company was founded by three programmers, **Franck Sauer**, **Yves Grolet** and **Yann Robert**, who came from coin-op developer Art and Magic through the Amiga days to console conversions. Their most successful title, the *Ultimate Tennis* coin-op, had the honour of being something of a hit in Japan – a notoriously fickle market. The team who now form Appeal not only designed the game but were also responsible for the board itself. They're therefore no strangers to the more technical aspects of game development, and it's little surprise to find that they're the proud owners of a sophisticated new 3D engine that allows for smooth, non-accelerated, true-3D PC games. *No Respect* will be the first to use the engine, with *Outcast* to follow in the autumn.

What is a surprise is that the engine relies on voxels rather than polygons to generate landscapes. Equally surprising is that these voxels bear none of the hallmarks of their predecessors – no pixellation, no slowdown and a suspiciously high resolution.



Appeal's HQ, where the team has been developing a powerful PC 3D engine, is based in the town of Jambes, in Belgium

Sauer explains: 'You could argue that by using voxels we're going against the current way of thinking, but really the most important thing for us is speed and realism. We believe we can have both in one engine. We do use polygons, but only for the ships in *No Respect*, not for the buildings or for the landscapes.'

Admittedly, the arenas do betray their voxel origins once the player moves too close to a mountainside or dips too steeply towards the ground, but pixellation is nowhere near as evident as might be expected, and the buildings themselves look just like polygon models. So ▶





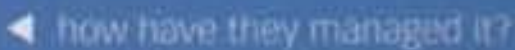




No Respect **will be the first Appeal title to see the light of day. The voxel-based engine allows for 16bit colour and an interpolated VGA resolution which would look truly stunning pushed through a TV monitor. Because of its voxel-graphics basis, the game will not be accelerated for D3D cards**



Eric Mottet is Infogrames' vice president of production. Much of his time is spent jetting between Lyon, Brussels, Manchester and California, ensuring that development resources are shared







Space Circus **is recognisably French, incorporating cutesy characters and some seriously strange visions of the future**

how have they managed it?

'The secret to this technique is to find a way to texture-map the vertical sides of the voxels,' explains Sauer. 'In other words, we can treat them like polygons, but without the need to construct the underlying geometry, which eats up processor time. The maps are built in *3D Studio* and then transferred into voxel maths and textured on the fly. A voxel landscape is routinely much faster than a polygon landscape, especially for the PC. Of course, there's no need for a 3D accelerator if you're not chucking loads of complex objects around.'

Hence, both *No Respect* and *Outcast* will run quite respectably on a 100MHz PC, without the graphics cards that many developers are relying on to save their games from the frame rate hell common to the most ambitious PC projects. *Outcast* takes the techniques used in *No Respect* a stage further. All the characters in this sci-fi action adventure are constructed using polygon models, attached to a previously created skeleton and animated with *Alias Power Animator V7* on Silicon Graphics workstations. The stunning-looking buildings are voxel-based, with the odd polygon here and there for the tops of archways (voxels cannot bend or have 'holes' in them) and for some of the more intricate structures (tables, chairs, etc). The main character, unimaginatively called Stan, looks extremely real, thanks to Appeal's bump-mapping textures which warp like skin when the character moves, giving clothes an authentic look and the skins of the strange creatures an impressive degree of realism, further enhanced by an exacting set of AI routines known as the 'GAIA Engine'.

'The GAIA Engine uses "agents" to define the behaviour of the creatures within the game,' explains Sauer. These agents, which are arranged hierarchically, with the most important being the "survival" agent and, of course, the sense agents, such as "look at" or "listen". Each reacts differently to a situation and produces a behaviour pattern based on the circumstances. For example, let's say you're shooting at a soldier guard. He has his own order to attack you (the first agent), combined with his fear of being shot (second agent). This might produce a behaviour pattern that combines the two, such as taking cover before firing at you. It feels incredibly natural.'

And 'natural' is apparently how the relationship between Infogrames and Ocean feels. It may seem like an odd coupling, but the companies are different enough to provide each other with new opportunities, which can only be good for the ambitions of the parent company, Infogrames Entertainment. Suddenly, the groundbreaking days of *Alone in the Dark* seem irrelevant. The new Infogrames has the talent, the technology and the muscle to be the player that it always knew it should be, and it is stepping confidently into the light. E









At first glance, ***Space Circus*** **looks a lot like an N64 game. It is, in fact, one of the first 3D platform/RPGs for 3Dfx. Though still in the early stages of development, it already bears many of the hallmarks of a great title: a strong character, smooth visuals and some varied and complex level designs**













***Outcast* is extremely impressive. The lead character can run, jump, move his arms independently of his body (for aiming) and moves with the most astonishing fluidity throughout the vast realtime landscapes created using Appeal's revolutionary voxel/polygon-driven 3D engine technology**

Interview with Bruno Bonnell (Chairman, Infogrames Entertainment)

Edge: Is Infogrames still a French company?
Bruno Bonnell: We can really be called a European and a worldwide company and we need to think globally as well as locally. Licences are a prime example. Let's say you sign a licence for a soccer game called *Manchester United Soccer* – that's okay for England, but what about France? Paris Saint-Germain would be more appropriate, and in Germany Bayern Munich would sell well. What we would do is create the game, the engine, the menus, etc, and then use our local teams to adapt the game for each country. We are, in fact, working on a soccer game now, but that's for another time, I think.

Edge: What has Ocean done for Infogrames?
BB: We're very aware of the importance of brands. The Infogrames brand, in Europe at least, means family entertainment and multimedia products and we intend to keep it that way. The Ocean brand will be the action-based label, directed primarily at teenagers and arcade fans. With Ocean, obviously, we do get DID into the bargain, which is a very strong simulation brand, so we have all the bases covered.

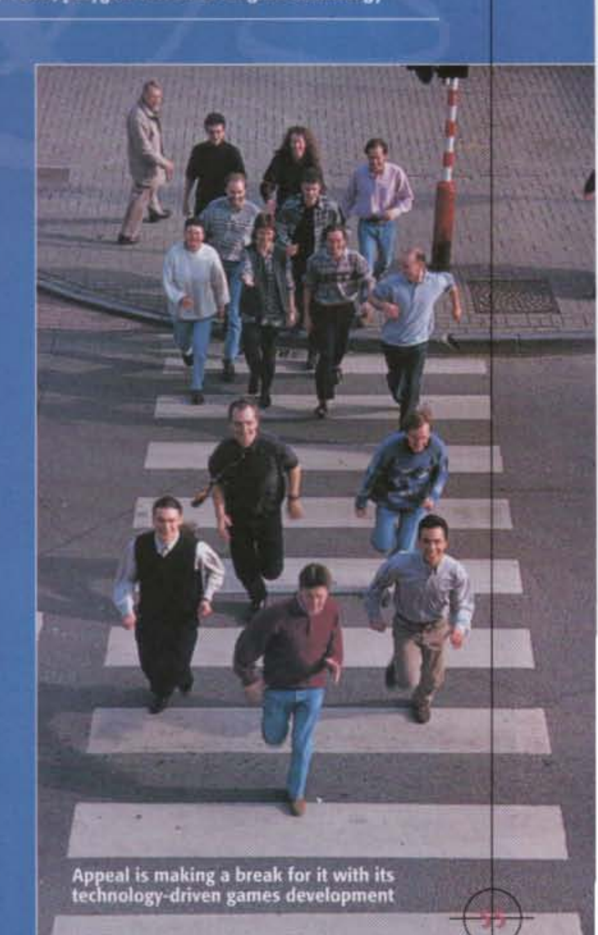
Edge: What about the future
BB: My goal is that one day, everything will be distributed online and integrated, and we will brand the sites, like MTV, and they'll be like channels rather than sites.

Edge: Why buy Philips Media? Surely, it is useless to a company as big as Infogrames?
Philips is, in fact, two companies in one. One of them is a catalogue titles business, with mostly old-fashioned CD-i titles, but also some strong sellers, such as the multimedia atlases and encyclopaedias. The second business is a distribution arm that is by far the most powerful in Germany and France and has avenues all over the world, and that is primarily why we made a bid for the Philips Media company. It's part of an overall strategy.

With Ocean we now have strong distribution in the UK too. But the thing you have to remember about Philips is that they were in this extremely tricky and demanding market known as 'multimedia', and they weren't particularly successful.

However, there is a lot of development talent left at Philips. We have already seen the products they have lined up for release in 1998, and I think you'll be impressed.

Edge: How did Ocean and Infogrames get together?
BB: It was a very pragmatic and logical decision. We were looking to expand, we met up with **David Ward** at Milia last year, and said, well, why are we fighting against each other all the time? We could be two small fishes in a big pond, or we could be one big fish. Infogrames was very strong in France, whereas Ocean was very weak, although strong in the UK, where Infogrames was weak. It made sense for us to merge, and gain a strong presence in Europe and, next, in the United States.



Appeal is making a break for it with its technology-driven games development

boss game studios

Edge's first stop on its recent jaunt across America's West Coast was at a software company born of a major-league movie special effects house...

'Yeah, the police popped him a couple of times for drink-driving and he ended up losing his license; I used to drive him over here all the time.' This is Tim, **Edge**'s taxi driver, a Boston-bred, baseball-capped fellow whose waistline betrays an obvious fondness for that most iconic of American dishes, the burger. In the best taxi-driving tradition, he's regaling his passengers with one of many guess-who-I-had-in-the-back-of-me-cab-the-other-day tales – in this case one **Bill Gates**, the founder of a certain Seattle-based computer software colossus.

Edge is in Seattle because the place, and the west coast area of the US that surrounds it, is home to a wealth of computer companies – hardware manufacturers and software developers alike. Some are well-established, like Gates' MicroSoft in Seattle and Nintendo's American HQ in Redmond, Washington, while some are only beginning to make names for themselves. This latter group is of most interest to **Edge**, which is visiting three fledgling entertainment software companies during a whistle-stop tour of the city among whose lesser claims to fame is being the birthplace of grunge...

As Edge crosses a bridge, heading towards its first stop at Boss Game Studios, Tim, in his self-appointed role as taxi driver-cum-tour operator, is beginning to get up a full head of steam.

'We can only use this lane because I've got at least two passengers on board – any less and you have to use one of the others. One guy, though, he used to drive to work every morning with two dummies propped up in his car, heh heh. It didn't take the police long to rumble his plan...'

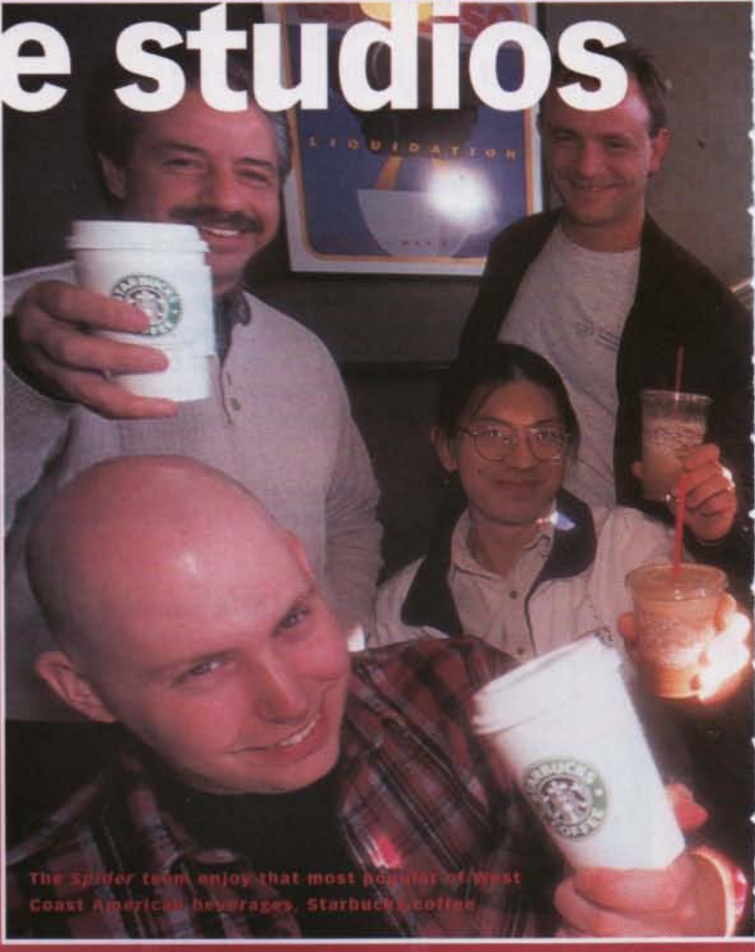
He isn't finished yet. 'There used to be another bridge like this one just down from here. It was like a floating one, like a pontoon sorta thing, and one day some jerk left one of the doors open and all this water poured in and obviously the whole thing just completely fuckin' collapsed.'







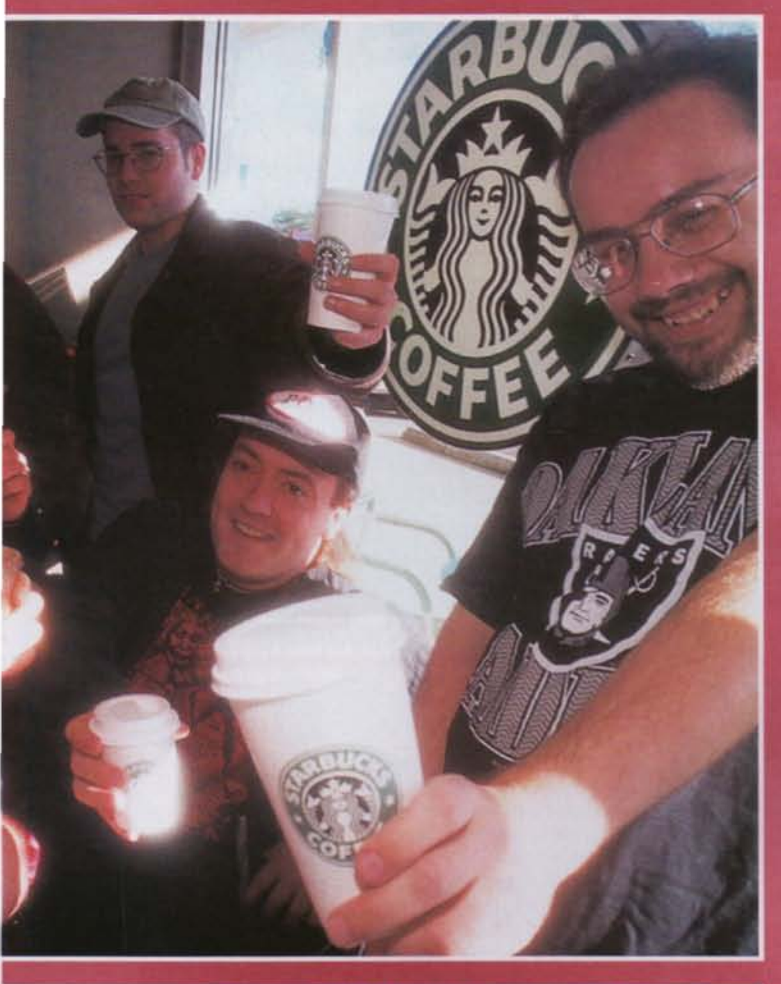
Boss Game Studios' first N64 game, *Top Gear Rally*, features some startlingly impressive weather (top) and lighting (above right) effects



The *Spider* team enjoy that most popular of West Coast American beverages, Starbucks coffee



A local Seattle hostelry provides the backdrop to the *Top Gear Rally* team, whose N64 efforts are shaping up healthily











The game's extremely effective specular lighting effects are evident in this drive-by sequence, which also reveals a high level of detail

Hearing such examples of human fallibilities does not exactly inspire confidence when visiting foreign parts. It is with some trepidation, then, that **Edge** finally steps out of the cab and approaches the building which is home to Boss Game Studios, a development house formed as an independent venture by Boss Film Studios, the special effects company whose CV includes work on such celluloid notables as 'Ghost Busters', 'Die Hard' and 'Species'.

Fortunately, its inhabitants appear sound of mind by comparison to some of their more unhinged compatriots. Oddly, though, considering the company's American lineage, its four key personnel all hail from the UK: vice president of product development **Colin Gordon** previously worked as development manager at Virgin in London; technical director **Rob Povey** worked for a number of English development houses before leaving for the US; art director **Martin Sawkins** once held a senior artist position at Sega Europe; while music director **Barry Leitch** used to be senior musician at Ocean Manchester.

'I guess it is unusual,' admits Gordon, 'but they hired me first, so I wanted to work with people I knew, and could relate to, so it made sense. Does it make the company any different from other US developers? Yeah, we have to pay more for our liability insurance, and when we go out drinking we know which four will still be there when it's closing time!'

The company's first title, *Spider*, has just been released by BMG Interactive. While the game, a PlayStation platform affair similar in style to *Crash Bandicoot* and *Pandemonium*, isn't a groundbreaking piece of software (though it does have its fair share of clever touches and, of course, an original lead character), it's a fine first effort and paves the way for more ambitious projects in the future.

The first of these is *Top Gear Rally*, a Nintendo 64 racing game which is the follow-up to the absurdly addictive 16bit *Top Gear* series from Kemco. The game is set to offer six different tracks, nine cars (with the possibility of secret models to be discovered beyond that), three modes of play (Practice, Tournament and Arcade), customisable vehicles (players will be able to change paint colours, tyres and engine specs), and variable weather conditions.

Edge is sitting in Boss's conference room as Rob Povey plugs in an early version of *Rally* and begins to demonstrate the game's 3D engine. Selecting a debugging mode, he uses the joypad to rotate and spin a car model onscreen, demonstrating a remarkable specular lighting routine which gives incredibly realistic-looking reflection effects upon its sleek lines. Now, he's plugged in another pad and brought a second car into the fray, switching on its headlights to bounce them off the other car's body. The results are like nothing seen by **Edge** on the N64 to date. Flipping into snowy weather mode, he proceeds to drive around the track, showing off the headlights as they cut through the now-foggy atmosphere. The effect is *hugely* impressive for a home system.

If **Edge**'s research is up to scratch, driving titles are its readers' most favoured form of game. Sadly, N64-owning **Edge** readers have so far had little









***Top Gear Rally* features all the usual driving game elements, including bridges (top left) and tunnels (above right), but the N64 hardware makes it a far more visually appealing experience than its 32bit contemporaries. A split-screen mode will appear in the finished game**

to shout about in these terms. *Cruis'n USA*, the only example so far released on the system, is hardly the sort of game to get the juices flowing.

'I think it was difficult for Williams because they were trying to take an arcade game where the track layouts were designed for the coin-op technology,' says Povey diplomatically. 'That always puts you in a bad position. I'm not saying they couldn't have done a better job – they probably could have done, to be perfectly honest.'

So just how difficult *is* it getting a convincing driving game engine up and running on the N64? The evidence so far has been fairly grim.

'Well, first of all, we looked at the hardware and thought, what can we do and what can't we do? Our original car specs had 500 polygon-part cars but we were only going to use transfers on the doors, so we'd have spot panels, and then we could get the spec up, basically for free, as you're only highlighting one texture,' explains Povey. 'We tried that and it didn't look very good. Then we tried a 350-polygon car textured with a special highlight and that's what we ended up with because, performance-wise, it was not all that different to the 500-poly car. Background-wise, this is the third revision of our engine. And it's not a big secret: getting performance out of the N64 is about optimising display lists. In our first attempt, we did what we did with a PlayStation game which is to take large chunks of like polygons and just slap them down. But we got really appalling performance that way, so we decided to break everything up into cells, but that didn't work because of artwork/technical compatibility: we'd start out with a track with 3,000 polygons and end up with 9,000 polygons in there – just completely useless. Our current version is cell-based but uses really efficient display lists and claims. That's running really pretty impressively in terms of polygons; we're probably getting better performance than most people.'

Indeed, the racing environment on display during **Edge**'s demonstration – a desert-flanked affair which winds through a small built-up area – is certainly impressive. But, regardless of such graphical finesse, racing games live or die by their playability. With this in mind, Povey leads **Edge** into his office, where he's currently tinkering with the behavioural aspects of *Rally*'s cars.

'We've tried to be very realistic about it but still keep it fun,' he says, spinning and fishtailing a car around within a live N64 window on his SGI workstation. 'So, we're still working on what we have to fudge to make it play like a good game rather than like a simulation, because that's what we want at the end of the day.

'It'll probably be past *Sega Rally* slightly. *Rage Racer* is a game where you bounce off white lines – once you fishtail out there's not a lot you can do about it. *Sega Rally* is a game where you can control that stuff. I want to build on that stuff but I also want to build something somewhat more realistic. Y'know, you can roll the car in this which you can't do in *Sega Rally*. You can spin the car out and it'll spin a full 360 degrees. We're still trying to get it so that if you lock the steering wheel at a hundred miles an hour you don't turn the car over too much, as that's just not really much fun. I mean, *NASCAR* is a good game but I don't want something that's so complicated that it frightens the user to the point where they don't have fun playing it...'

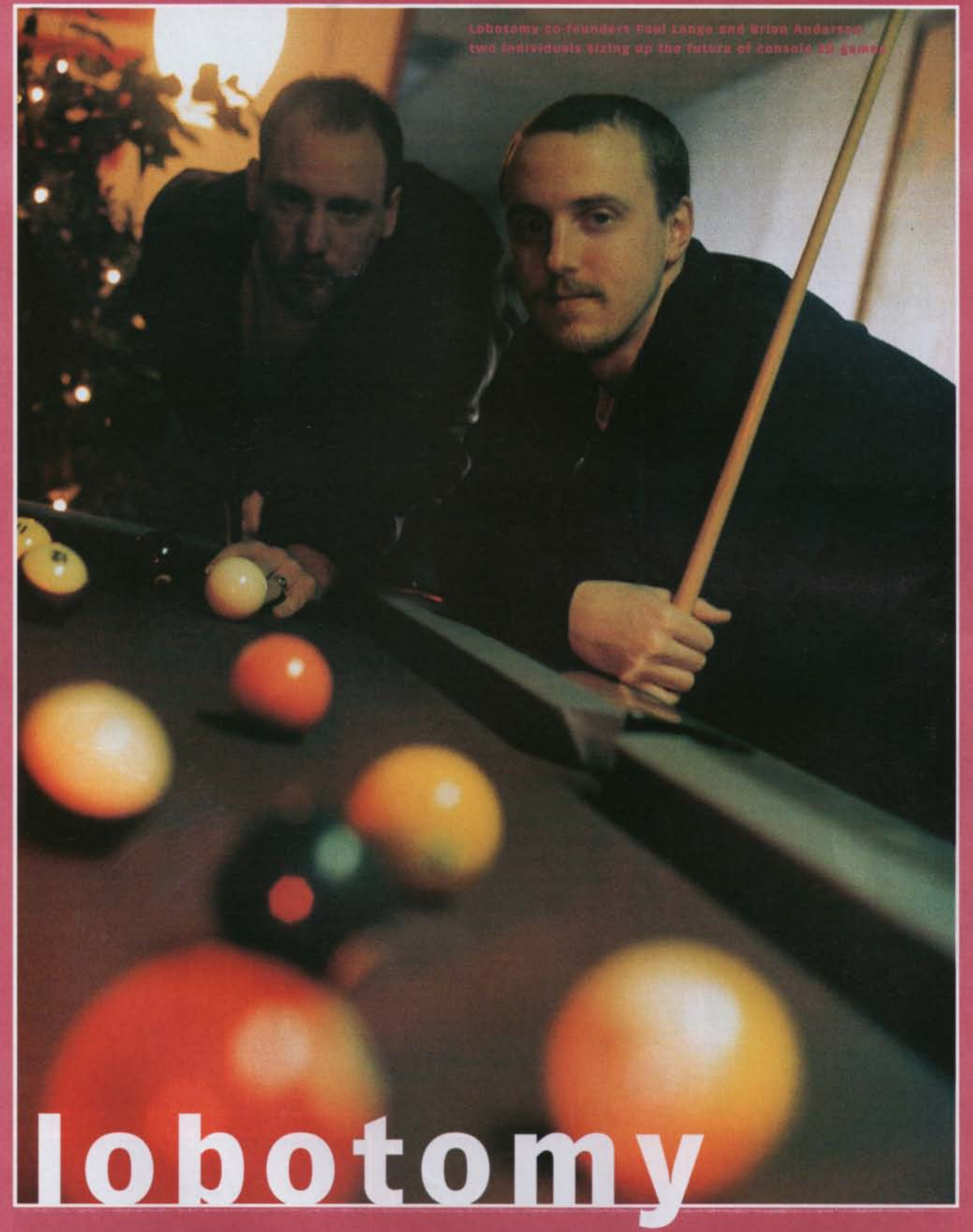
'We've tried to be very realistic about it but still keep it fun. So, we're working on what we have to fudge to make it play like a good game rather than a simulation'
Rob Povey, technical director



Martin Sawkins, art director

Rob Povey, technical director

Colin Gordon, vice president of product development



Lobotomy co-founders Paul Lange and Brian Anderson: two individuals sizing up the future of console 3D games

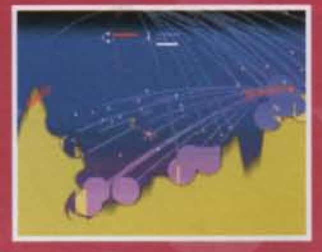
lobotomy

Just around the corner from Boss is a less corporately structured outfit whose console 3D endeavours are currently flavour of the month...

Once upon a time, every child faced with the question, 'So, what do you want to be when you grow up?' would have answered 'footballer', 'astronaut' or maybe 'train driver.' Nowadays, though, there's a definite probability that the response would be something like 'videogame designer.'

And if any *Mario*-addicted youngster were to ever see Lobotomy's HQ it would surely only further such ambitions. A soft-drinks machine stands next to a chocolate-bar vending unit along the left-hand wall; beyond them stand countless original arcade machines, including *Mario Bros.*, *Battlezone*, *Space Invaders* and *Robotron*, all set on free play and tagged with Post-It notes detailing the highest score in the





Lobomoty's *Exhumed* (left), published by BMG Interactive, is a fine 3D shoot 'em up (see page 90). Hidden game, *Death Tanks* (right)



A group with a challenge on their hands: Lobotomy's team committed to bringing Quake to the Saturn

building. The adjacent room doubles as a pool hall and a music studio, while beyond that is the gaming room, where a 50-odd-inch Toshiba television serves as the output for a stack of gaming machines. Upstairs, in a warehouse-like section of the building, there's a skateboard half-pipe and a collection of musical instruments used in staff jamming sessions during their free time. At lunchtimes they shoot basketball in the car park. Yes, this seems like a good place to work.

To look upon Lobotomy as a bunch of guys only interested in having a good time is to totally miss the point, though. This is the codeshop which crafted *Exhumed*, one of the very few exceptional console-based *Doom*-alikes in existence, and the game which granted the company the honour of bringing *Duke Nukem* and *Quake* to the Saturn.

The two men behind this unique and formidable setup are co-

This is the codeshop which crafted *Exhumed*, one of the very few exceptional econsole-based *Doom*-alikes in existence; the game which has brought the team *Quake* and *Duke Nukem*

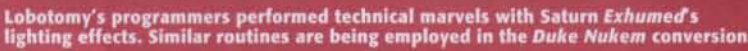
founders **Paul Lange** and **Brian Anderson**, both of whom came from Nintendo US headquarters, just down the road in Washington. Lange admits that the conditions at Lobotomy are quite different than those of NOA, but was this something he always pined for?

'Kind of, but we really didn't know what it was like until we created it. At Nintendo, you go to work, you do your eight-hour day, you go home and you do something else. Here, you live and breathe your job and you may not go home...'

Such dedication to their craft has seen the team build 3D engine technology that ranks as the leader in console terms. 'I don't see anything better as far as first-person games go,' attests Anderson. 'I'm talking more in terms of engine speed and art quality, plus there's a slight difference in our game design that sets it apart from the typical first-person shooter. But definitely the technology that we've developed in-house is, I think, superior to other similar technologies used in first-person console games. We haven't seen anything that runs as fast that uses as large-sized areas and environments.'

The Saturn conversions of *Duke Nukem* and *Quake* are cracking along at a respectable pace. Each uses a slightly modified version of

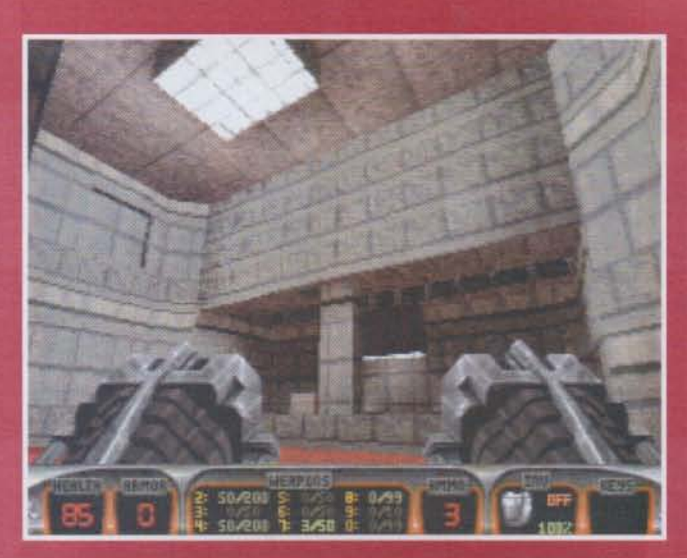




Lobotomy's programmers performed technical marvels with Saturn *Exhumed*'s lighting effects. Similar routines are being employed in the *Duke Nukem* conversion









Though there is still some way to go with the conversion of *Duke Nukem*, progress is being made at a frightening pace. Lobotomy's Saturn 3D engine is one of the most powerful outside of Sega's own AM teams, and, judging by *Exhumed*, the company has the design skills to match

the engine developed for *Exhumed* – *Duke*'s to accommodate the wide open spaces evident in the game world, *Quake*'s to engineer the complexity of the architecture of id's classic. But can Lobotomy's 3D technology really hope to bring something as ambitious as *Quake* to the Saturn successfully?

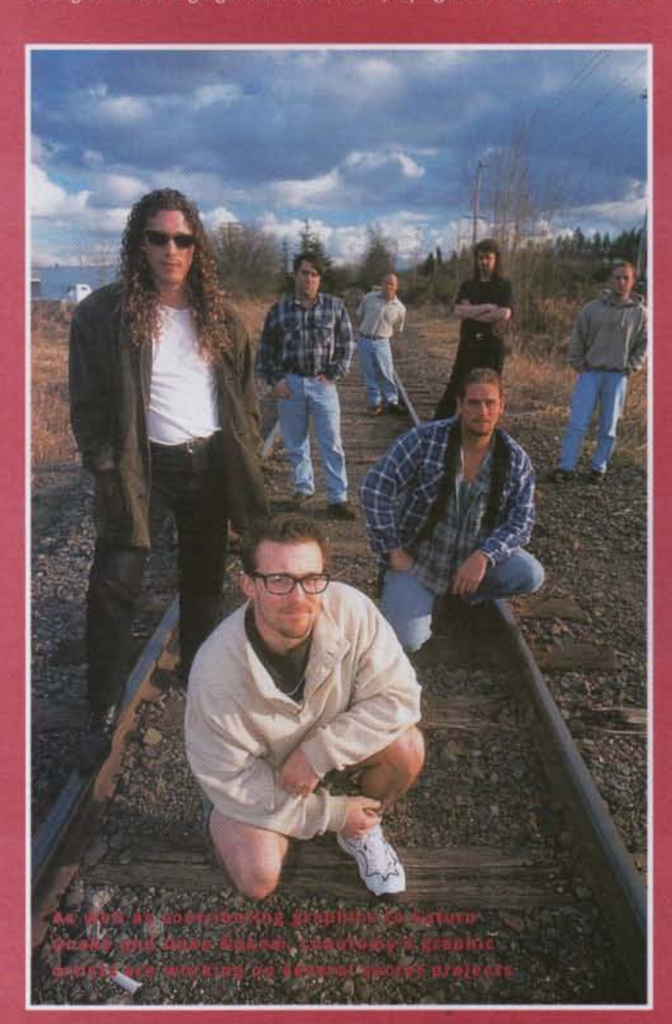
'Well, yeah,' assures Lange. 'Our engine works differently than the PC *Quake* engine does. Ours is tailored to what the Saturn does best, and that respect it'll be most adequate.'

On the evidence witnessed during **Edge**'s visit, such claims do not seem over-ambitious, giving Saturn owners some first-rate thirdparty software to look forward to during the remainder of 1997.

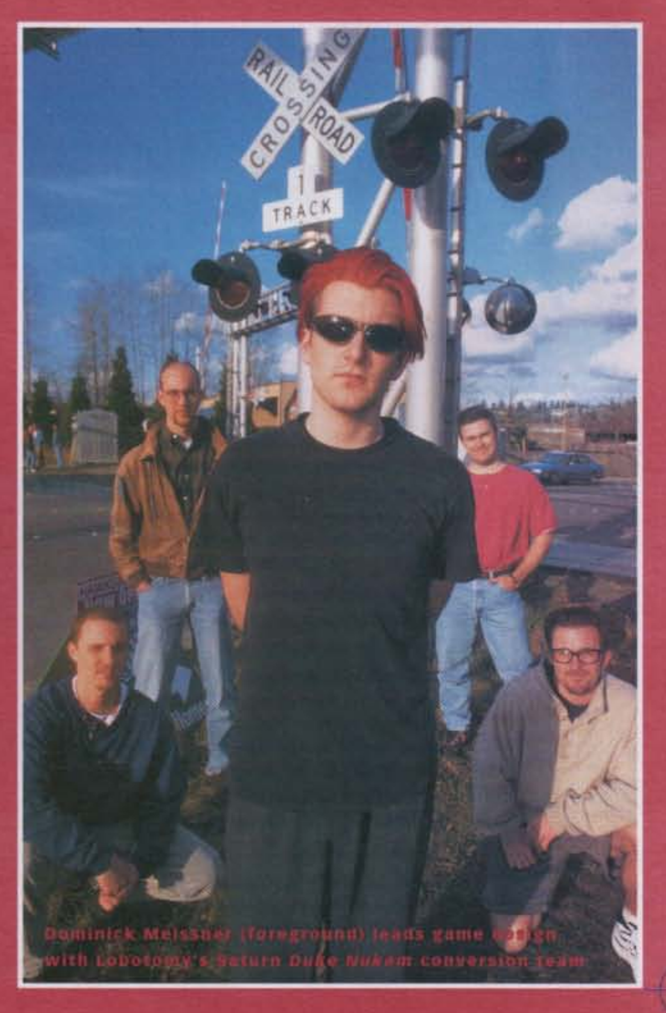
As **Edge** is led into the gaming room, six members of staff are sitting around the gargantuan television playing *Death Tanks*, a *Worms*-style multiplayer affair which appears as a hidden subgame in the US release of Saturn *Exhumed*. With so many players taking part, the game reveals itself to be a minor work of genius, and further proof that this relatively small group of dedicated gameheads knows how to put entertaining software together, whether it's full-on, multi-level 3D shoot 'em up extravaganzas or a graphically crude, 2D combat game.

The prevailing atmosphere within the gaming room soon reveals itself to be of 'enjoying work' rather than simply 'going to work'.

'The main attraction of Lobotomy,' reckons Lange,' is our unusual way of doing business. We're a really close group. Even when there's 20 of us, the people mesh well and talk to each other and we have a comfortable environment. Either people get a real job or they come and work for Lobotomy...'



As well as contributing graphics to Saturn *Quake* and *Duke Nukem*, Lobotomy's graphic artists are working on several secret projects



Dominick Meissner (foreground) leads game design with Lobotomy's Saturn *Duke Nukem* conversion team

zombie

While its name might suggest otherwise, Zombie is one of Seattle's liveliest up-and-coming videogame software houses

In the heart of Seattle's city centre, **Edge** approaches an inconspicuous-looking door amongst a row of shops, looking for some indication that this is indeed the place where it is supposed to be. A welcoming voice comes over the intercom, confirming that this is indeed the home of Zombie, a company formed in 1993 with the intention of bringing its founders' expertise in the world of virtual reality to the videogaming market.

So far the fruits of this seemingly covert operation's labours have included *Ice and Fire*, a 3D PC and Macintosh title cooperatively produced with *Tetris* creator Alexey Pajitnov, and *ZPC*, a *Doom*-style PC game with probably the most distinctive graphics ever seen on the system, courtesy of MTV animator Aidan Hughes.

Neither games were big commercial successes, a factor which is probably best put down to the company's lack of videogame experience. While the games had novel ideas by the sackload, the mainstream game-buying audience wasn't particularly eager to take on board their themes, which fell far outside of the simulation and adventure-game boundaries so beloved of computer gamers.

Zombie's latest title, however, looks likely to set it on course for the success. *Spec Ops: US Army Rangers*, a *Doom*-style game for the PC and PlayStation, bears all the hallmarks of being a head-turner. *Spec Ops* presents an elaborate 3D world where players undertake a selection of missions based on real-world scenarios.

'I was in the army for a while so I have my own interest in the project,' says **Mark Long**, co-founder of Zombie, referring to the inspiration for the game. 'I was with **Joanna** [**Alexander**, co-founder] working with virtual reality research at a laboratory previous to this, and while we were there we were working with $50,000 graphics workstations. We could see that there were going to be powerful PCs affordable in a few years and we began to imagine what we could do with them. So, we've probably had this idea for a long time and just pitched it about a couple of years ago.'

Though at first sight *Spec Ops* may look like *Quake* with real-world army themes, there's much more to it than that.

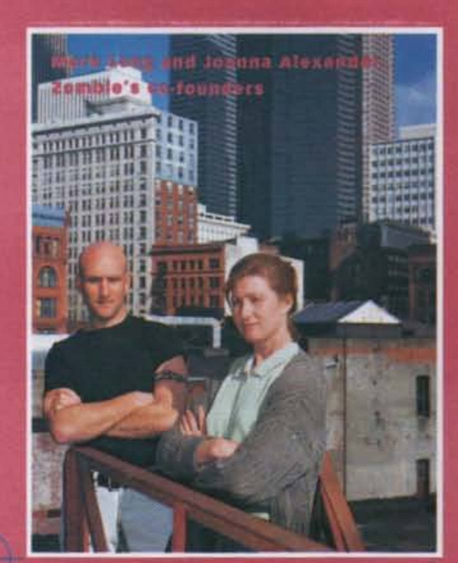
'It's going to have a strategic component,' explains Long. 'We just boil it down to action and realism. It has to satisfy that kind of innate desire that a guy has to have the weapon exactly right – guys like to obsess over detail like that. But dealing with *Quake* and everything in the first person genre, you basically kill everything that moves. I think one of the reasons *Quake* didn't do so well in the US was that that desire had been satiated [with *Doom*] and the player needed to be provided with something new. We stuck with first-person because we wanted you to feel that you are a ranger, not like you're looking at a character who is a ranger, but by making the other ranger characters flock and react to what you do, you add this extra strategic dimension.'

So, rather than just setting the player up with a series of switches to flick, monsters to blow away and exits to search out, *Spec Ops* provides what appear to be true missions, with variable elements.

'Basically, a mission level starts off with you flying in by helicopter and you have four sub-missions,' expands Long. 'In the Aurora mission, you have to find a biplane, try to rescue the two pilots that are in there, remove the data module, release it via an air balloon and then an AC-130 plane comes in and picks it up – kind of like 'Ice Station Zebra', if you know that movie.

'Then you move on to two other sub-missions, and the guys that are on the Aurora are Russian special forces guys. You have to fight them off, get into the Aurora then fight your way back out and make your extraction point later on.'

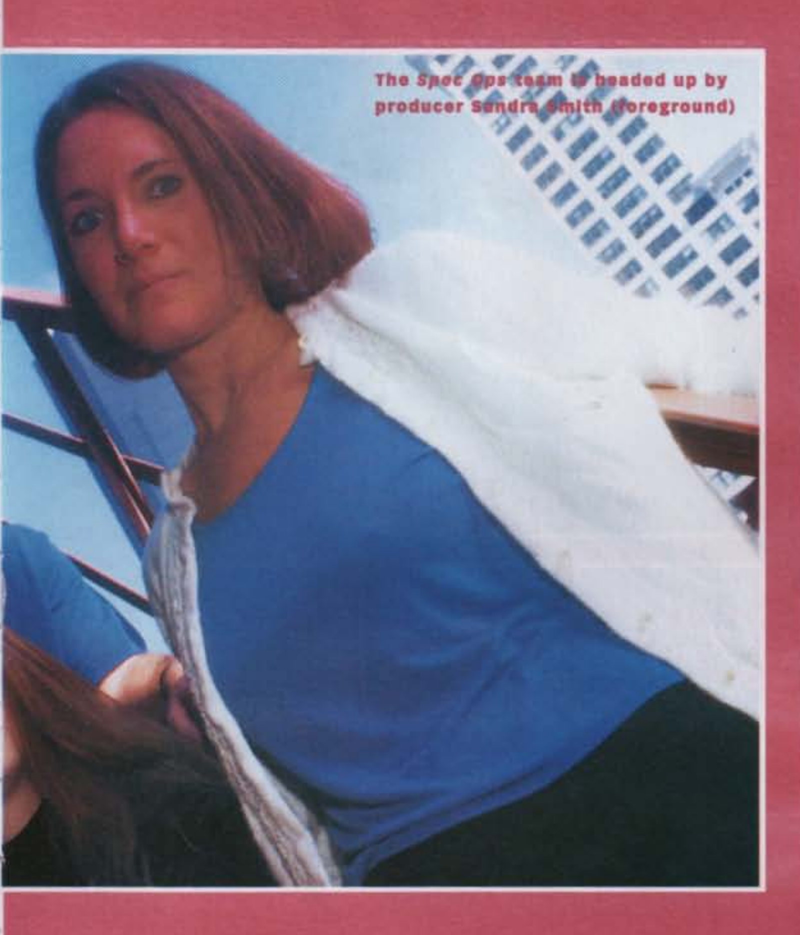
Though some games have tried to push the first-person shoot 'em up genre in different directions in the past – *Exhumed*, for example,


Mark Long and Joanna Alexander: Zombie's co-founders


John Williamson, producer of PC/Mac Internet title *Spearhead*



Linley Storm, producer of Zombie's previous PC [illegible], *ZPC*


The *Spec Ops* team is headed up by producer Sandra Smith (foreground)







Zombie's Internet tank battle sim, *Spearhead*, is one of the most complex yet devised, and can be played via a free Zombie server

has a half-hearted stab – not one has been as brave as *Spec Ops*.

Long is clearly eager to move away from the standard videogame templates. 'It's not going to be like a normal shooter where you take hits and health is reduced. If you're shot, you're wounded. If you get shot again, you're dead. It's going to be one of those games where you work very, very hard to advance.'

As an idea on paper, this approach looks both original and intriguing. But isn't such a system going to be overtly restrictive in terms of keeping the action cranked up and the game exciting?

'I think it's a fine balance. We haven't got into play-balancing yet but it's a valid point. The thing I feel confident about is that, because we're using this strange attractor approach, the characters will never do the same thing at any given time, which will make it even harder, so we're hoping people will get a lot of pleasure out of that.'

These ambitious elements would amount to little without a decent 3D engine, of course, and Zombie has one in place in the form of its 'Zengine'. 'I would venture that it's superior to other technology in a couple of aspects,' says Long. 'Right now, one thing that's happening is 3D APIs like Criterion's, Renderware's or Open GL from SGI are accelerated by these cards and now you no longer really have to write your own 3D engine. But we wrote one to optimise a variety of reasons. One reason was this database hex that allows you to have lots of texture maps swapping in as you play the game. The other reason was we're using some pretty sophisticated AI techniques, something called potential fields or strange attractors which allow for pretty complex behaviour from the non-player characters. And in the

'It's not going to be like a normal shooter where you take hits and your health is reduced. If you're shot, you're wounded. If you get shot again, you're dead' Mark Long, co-founder











Every *Spec Ops* character is a full polygon model (above), while the vehicle models are based on their real-world counterparts (right)

game, you have six rangers and they flock and move appropriately with you. So, if you run up to a door in a building, your ranger buddy will automatically run up, kick the door in and stand back with his weapon – the animation's very fucking cool.'

Another true-to-life aspect of *Spec Ops* is that every character in the game is made up of polygons which are textured using photographic data. 'We used studio shoots where we went in and bought all the costumes and brought rangers in and shot them against a blue screen from four perspectives,' elaborates Long. 'It's like making a dress, you cut those out and lay them on a 3D model. By going for all photo texture sources, the environments feel incredibly real, especially when we put the character in there and finally add good audio which, typically is that last thing that games companies pay attention to. We've been out in the field four times with the ranger battalions here in Port Lewis and captured audio.'

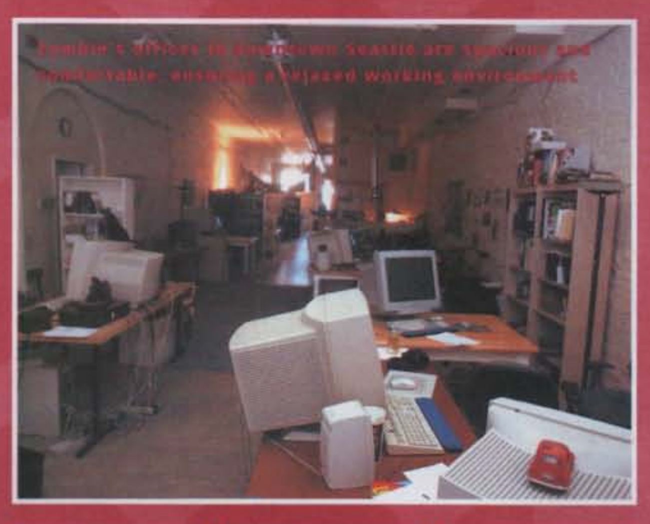
Spec Ops seems to have realism cracked in playability terms, too. 'If you're gonna jump you're gonna jump over a low obstacle. You're a real human being, you don't have any super powers. As far as your character's concerned, we had a long debate about whether you aim or do you just swing and fire and I said, "You're a fucking ranger, man. You're super-lethal. You hit what you aim at." And so, if you start running, your gun will automatically drop down. If you run out of ammunition you'll automatically drop your clip and reload. You'll be able to place C4 explosive charges, pull it out, set the fuse, you can throw grenades, shoot all the weapons that we have.'

'By going for all photo texture sources, the environments feel incredibly real, especially when we put the character in there and add the audio'
Mark Long, co-founder

An ambitious project indeed, then, and one that'll certainly be worth close examination when it appears towards the end of the year.

Zombie's other big project at the moment is another military-themed title – *Spearhead*, an Internet-based tank battle simulation game for the PC and Macintosh.

John Williamson, producer of the game, seems to concur with *Spec Ops*' design ideals: 'We're focusing on realism, realism, realism, whenever possible. All the texture maps that we have are photo texture maps, either from buildings or real tanks. We went out into the field and recorded tanks at a live fire, so as far as I know we're the only people with real digitised sounds.'


Zombie's offices in downtown Seattle are spacious and comfortable, ensuring a relaxed working environment




Models were filmed against blue-screen backdrops to create the texture maps for every character in *Spec Ops*, be they enemy or allie

The game has been designed from the ground up to be a multiplayer experience, a factor that is emphasised by a refreshing approach: players will be able to play over the Internet by connecting via a Zombie-based server for free. This aspect, along with its incredible comprehensivity, gives *Spearhead* the potential to be one of the most popular multiplayer networked games in the future.

If the finished versions of the titles seen by **Edge** during its visit demonstrate a level of content and coherence to match their obvious ambition, Zombie will surely grow in stature, taking its reputation that little bit closer to those of the more world-renowned companies that share its West Coast America roots...





The 3D-accelerated version of *Spec Ops* is particularly impressive (above, right). Zombie visited real firing ranges to sample sound effects for the game (top right)

nuMedia

in association with EDGE

No 12

A meeting point for media capitalising on the digital entertainment revolution

Computer technology was supposed to kill off reading – 'Why will people learn to read, if they can point and click at pretty pictures?' goes the Luddite argument. This month's CD-ROMs are both based on works of literature, however, proving that there can be a healthy interplay between the two media. Educational issues aside, a great album from Daft Punk and a pair of tube-shaped speakers lighten other corners of the media world.

CD-ROM 

- Published by Fox Interactive
- Developed by Circumstance
- PC/Mac CD-ROM £12
- Out now

Romeo and Juliet

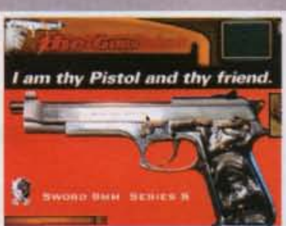
Attempts to modernise Shakespeare can be horrific: productions of 'Macbeth' with actors dressed as gangsters or sci-fi characters must haunt every Drama student's memories. Director Baz Luhrmann, however, has used the cool, recognisable scenario (Venice beach, CA) to reach a young audience and to accentuate the themes of sex and youth. The bard would have approved.

The CD-ROM companion to the film, which successfully mimics the movie's obsessions with style and youth culture, works as well. First off, the presentation is beautiful, using classical images as icons and featuring dozens of pictures and clips from the film throughout. The interface is interesting, too, allowing the user to view pictures from each scene in chronological order, and to click on important hotspots (lead characters, items, etc) for more information. It's also possible to go on to view (rather brief) background details on the social structure, moral values and gender roles in the film's 'Verona' beach setting.

What extends this product beyond souvenir status, though, is its inclusion of both the original text and the screen play. Users can thus compare the two, discovering what has been cut out and what has been altered to make the text fit with Luhrmann's vision. A great idea.

All in all, this CD-ROM is a clever, well-produced companion to a stunning film. While it could have revealed more about the movie (set/costume designs, interviews, etc) it does shed light on the play's themes and key symbols. This isn't just for A-level students, it's for anyone who wants to understand the movie on a higher level.







CD-ROM 

- Published by MacMillan Interactive
- Developed by MultiMedia Corporation
- PC/Mac CD-ROM £40
- Release: April 30

Sophie's World

The book 'Sophie's World' was something of a one-off in the publishing world: a runaway best-seller which appearred from nowhere, written by an unknown Norwegian (Jostein Gaarder). Frankly, it drove most to despair: an idiot's guide to philosophy dressed up in unspeakably clichéd novelistic underwear, it may be good airport bookshop fodder, but why was the press so kind to it?

Bizarrely, the CD-ROM version, published by MacMillan – which, by the way, has an excellent track record when it comes to quirky book adaptations – is rather good. If you like that sort of thing. It's easy to see why it works so well: the linear CD-ROM blueprint forces abandonment of the book's faltering prose styles, and therefore conveniently eliminates the weakest aspect of 'Sophie's World'.

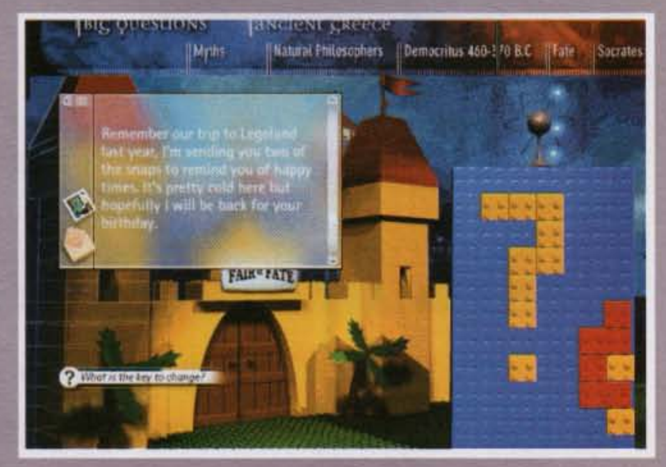
So, instead of a lame paperback which gives you the impression that the writer is an academic struggling to master a word processor, you get a CD-ROM with a tried-and-tested point-and-click interface. Through this interface you must progress by solving some rather unusual lateral-thinking puzzles, a feature which allows this product to work very effectively (and not at all patronisingly) as a philosophy primer.

Here, the malarkey used to develop the plot in the book – protagonist Sophie Amundsen's receipt of mysterious philosophical letters – has been subtly altered so that you receive the same letters, but as if they were e-mails. Acting on these, you progress slowly but surely through a number of different scenarios accessed by solving puzzles, learning about philosophy along the way.

The CD-ROM also has a very impressive time-line section containing a potted philosophical history, and you can trawl through this if you don't fancy the point-and-click stuff. Apart from anything else, this makes *Sophie's World*, to **Edge**'s knowledge, the only philosophy reference CD-ROM on the market.

Don't expect action-packed scenes or, indeed, any form of gameplay which does anything but grind along at a snail's pace. But, if you are fascinated by philosophy, you'll find *Sophie's World* an interesting purchase. The CD-ROM, not the book, mind.







Gadgets

RemoteLink

Universal remote controls festooned with lots of confusing buttons are old news, but with the advent of the Internet a whole new range of Web-ready controls are on the way. RemoteLink can control even the most advanced home electronics using just a couple of buttons, thanks to its extensive on-screen displays. RemoteLink automatically integrates your home entertainment boxes, and comes with a thumb 'mouse' to navigate your way round your telly controls or surf the Net.

Just run through an on-screen questionnaire to let RemoteLink know what components you own, and it'll do the rest. It can even switch the satellite receiver on, turn the video to the correct channel and start it recording. RemoteLink isn't available just yet, but should appear with new TVs and VCRs next year.

- RemoteLink
- Interlink Technologies
- Circa $399-499
- Available late '97 (US)



'Convergence' remote control, tel: 001 805 484 8855

Security Alarm Telephone

Yes, it's a telephone – but it's a telephone with a difference. Built in to the base is an infrared motion detector which guards your home while you're out. When the phone senses movement, it waits a moment (for authorised users to rummage around in their pockets for the key-chain wireless remote to turn it off) then silently dials up nine numbers of your choice: friends, family, work numbers and so on. When the TA2000 connects with someone, that person can ask the 'intruder' who they are via the speakerphone – if it's not a false alarm, they can call the police directly.

Accessories for the TA2000 include additional remote IR motion detectors, a smoke detector and door/window contacts. If you haven't been broken in to, you can call your mum on it, too.

- Security phone
- TelAlert. Inc
- $250 (approx. £160)
- Available now (US)



TA2000 TelAlert, tel: 001 403 541 1306

SoundTube speakers

Conventional, 'boxy' loudspeakers are fine if you live in a standard-shaped house, but suffer badly if placed in odd positions (like not against a wall). These weird floor-standers from the States, which look like components salvaged from the wreckage of an X-wing fighter, are designed to create top-notch sound, from any angle.

Inside the instantly replaceable SoundSleeves (which come in dozens of eye-watering designs), sit a series of computer optimised acoustic 'lenses' which direct music in all directions. This 360-degree, omnidirectional sound also means a larger sweet spot, and a better stereo effect. SoundTubes are 24cm in diameter and 90cm in length (although smaller versions will also soon be available), and should snake their way into the country late this year.

- Visual audio speakers
- SoundTube Ent.
- $450 (approx. £285)
- Available '98



Sound Tube speakers, tel: 001 801 647 9555

Comics

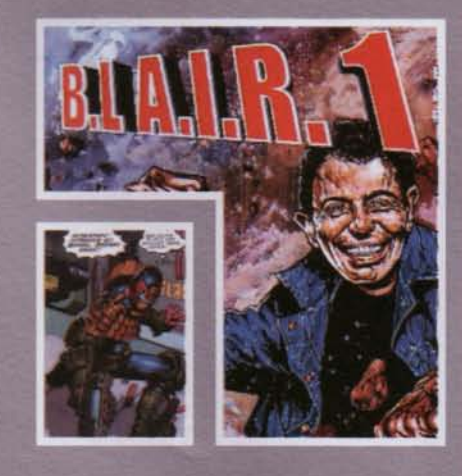
2000AD

When 2000AD began 20 years ago it was essentially a standard war comic transposed into a vaguely futuristic series of settings. The art was highly derivative '70s pulp and the story lines full of gung-ho 'Eat this, Jonny Foreigner!'-type violence – it's just that Johnny Foreigner was named Johnny Alien and given a laser gun instead of a Luger.

Times have changed. Somewhere between progs 400 and 500, the comic got serious, looking more deeply into the sci-fi storylines and deconstructing key heroes like Judge Dredd, Strontium Dog and Rogue Trooper instead of portraying them as heroic stereotypes. Judge Dread himself – the comic's endearing icon – was seen to be growing visibly old, breaking one of the major rules of Marvel comic book lore: thy hero shalt not age.

The irony, rebellion and manipulation of familiar themes that crept into the comic back then is more than evident in today's stories. New feature, Mercy Heights, for example, is a wicked 'ER' piss-take set on a hospital spacecraft. All the recognisable casualty room banter is employed ('Prep the O.R. now!'), except here, when a patient's body 'rejects' a transplant organ it is actually physically ejected across the room in crisp, well-defined graphics. Also relatively new is Al's Baby, another effective spoof – this time on 1930s gangster movies. Accompanying these fresh arrivals at the moment are two 2000AD stalwarts: Judge Dredd, of course, and Slaine – still being scripted with immense flair by the comic's creator Pat Mills. Both 'heroes' are always capable of entertaining, despite their age.

2000AD's mixing of serious themes with comic excesses has not staled. Judge Dredd was perhaps a more potent symbol in the Thatcherite '80s, but his steely fascism still gives a darkly humorous reminder that totalitarianism is always just a breath away. As for the other stories, great scripting, beautiful, diverse artwork and thematic depth are the norm. Yes, this is one British institution to be proud of.





- Published by Egmont Fleetway Ltd
- Weekly distribution
- £1.10



Music

Homework | Daft Punk | Virgin



The fact that these prolific French DJs have managed to fit time into their schedule to make an album at all was surprising. That the album should be this good is a near miracle. Merging hard techno elements with '70s disco sensibilities and plenty of kitsch funk posturing, the Gallic twosome have created an eclectic work of puzzling addictiveness. The recent single 'Da Funk' is an effective advert for what to expect: thudding basslines, chugging keyboards, weird tunes. Vive la difference.

Dope On Plastic 4 | Various artists | React



Bristol-based DJ John Stapleton's fourth selection of big beats shows renewed vigour, the mix of hip-hop loops and funky riffs working to create the ideal party record for discerning club types (though the chart crowd will relish Blueboy's 'Remember Me' and DJ Kool's hit 'Let Me Clear My Throat'). Sustaining the positive vibe from Danny Saber's opening cut right through to Raw Deal's closer is no mean feat, but 'Dope 4' does it with ease, proving that breakbeat-based music is more vibrant than ever.

Blow Your Headphones | The Herbaliser | Ninja Tunes



The title of the Herbaliser's new album, 'Blow Your Headphones' speaks true. Hip-hop, jazz, scratch and vocals (the latter from female artist, What What), blend to create excellent tracks like 'Bring it', 'Hardcore' and 'Ginger Jumps the Fence'. Plenty of samples, breakbeat and rap also flow throughout with the help of Fabian and Big Ted who provide lyrics to the awesome 'Saturday Night'. This album is filled with enthusiasm and experimentation, providing the listener with a host of classic tunes. Great value.

Cold Krush Cuts | DJ Krush vs Coldcut/Food | Ninja Tunes



After the success of Journeys by DJ, Coldcut have now merged forces with fellow Ninjas DJ Food and DJ Krush to offload high-quality sounds through an East vs West play-off. Tracks from the London Funk Allstars ('Junkie's Bad Trip') and DJ Vadim ('Headz Still Ain't Ready') stand out on the first disc, while Luke Vibert's 'Get Your Head Down' and Coldcut's 'Naked Leaves' provide the second with equally cool, mixed sounds. Quality tunes and vast combinations of rhythms and styles cement to form a very fine compilation.

The Morning After | Various | Positiva



Designed to soothe the savage beast after a night of wearing your feet down to their ankles on a dancefloor, 'The Morning After' contains a surprising amount of astonishingly chilled drum'n'bass from the likes of Justice & Blame, T-Power and Subtropic, which melt into legendary downtempo efforts from, among others, Photek and Plaid. Although it may get a bit jazzy for some tastes towards the end, this will turn even the most extreme state of wired paranoia into a contented chill.

What Goes Round | Various | MC Projects/Pinnacle



Ex-Drum Clubber Charlie Hall's small but perfectly formed label sets out its stall with a superb compilation, taking in everything from upbeat four-to-the-floor techno to chunky trip-hop, without bypassing dub-trance or the Chicago Old School sound. Buy this just to find out what K Alexi Shelby's naughty 'I've Got a BBD For You' stands for. Or, for that matter, the real, grown-up techno cuts from Multiplex, Phreax and DJ Shufflemaster. Proper, quality dance music for those in the know.

Books

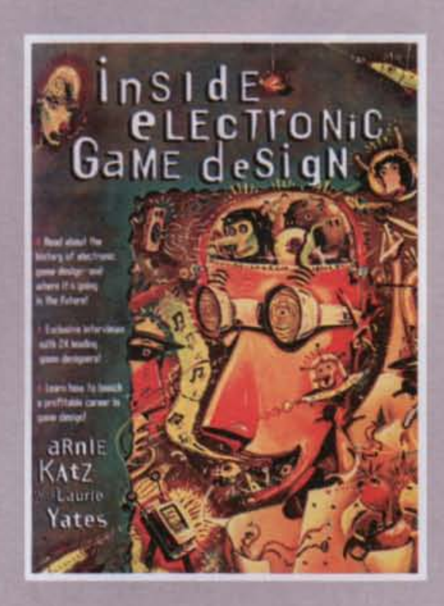
- Arnie Katz and Laurie Yates
- Prima publishing
- £23
- ISBN 1-55958-669-9

Inside Electronic Game Design

The electronic games industry will hold the dream career for many **Edge** readers. How many times have you played a game, and thought you could do better? The lack of formal training in this field shouldn't dampen anyone's ambition to become a games designer. As the comics industry is essentially fan run, so the games industry is populated with gameplayers who have turned their obsessions into careers.

How you go about getting that job as a game designer is distilled into the five chapters of this book. From an excellent potted history of the videogame industry to a brief look at an actual game design proposal, you'll find a wealth of insider information.

Biased towards the American experience, of course, you may feel that this doesn't apply to the UK market. Nothing could be further from the truth. The US market-specific elements are perhaps of less interest, but part two on game theory is an essential read no matter which continent you live on. Packed with practical advice, any budding games designers would do well to get hold of a copy.



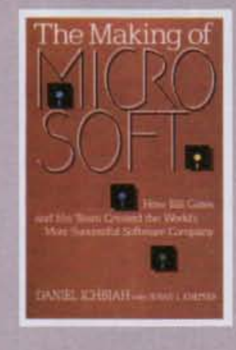
- Daniel Ichbiah and Susan L. Knepper
- Prima publishing
- £12
- ISBN 1-55958-225-1

The Making of Microsoft

This English translation of a French title is at first glance just another rehash of the well-worn Microsoft story. However, as many books on this subject gloss over the early years in their rush to talk about the release of Windows 3.0 – forgetting that these years are fascinating in themselves – Ichbiah and Knepper put those beginnings under the microscope.

For a change, the minutiae packed into this title makes it an ideal read if you need detailed information on the genesis of this company, from Gates' and Allen's early years playing with a PDP-10 at school, to their alliance with IBM. The detail makes this book stand out.

Originally published in 1993, this translation stands the test of time and is one of the best books of its type. It's a pity that it hasn't been kept as up to date as Robert Gringely's 'Accidental Empires'. As it stands, once you get to the release of Windows 3.0 on May 22, 1990, you must look elsewhere to complete the story. You could of course just read the second half of Gringely's book.



Porsche Challenge





Thanks to the use of over 500 polygons per car and some effective – but not faultless – lighting routines, *Porsche Challenge* is one of the most visually impressive, realistic-looking racing games yet seen on the PlayStation. The cars maintain a near true-to-life look throughout the game





Though choice is limited to one car, it *is* one rather glorious example

Sony Computer Entertainment Europe made a stunning development debut with *Total NBA '97*. Looking around for its second inhouse development project, it came up with a rather more exclusive, and prestigious, license. Porsche is in the process of launching its first new car for two decades and has decided that the PlayStation is the platform to take the Boxster into the hearts and minds of videogamers the world over. Good choice.

Unsurprisingly, car companies are notoriously twitchy about just how their multi-million-pound projects are portrayed, and what should be *Porsche Challenge's* strongest point seems, at first, to be its Achilles heel. Along with full blueprints, technical specs and the opportunity to drive the real thing, the programmers seem to have received plenty of concrete restrictions. The game therefore falls neatly into the sim section of the racing genre, and is probably too sluggish to really satisfy committed fans of arcade-style examples. While Namco is free to offer a wide range of vehicles up to and including the legendary Devil cars in its *Ridge Racer* series, SCEE is lumbered with just the one (albeit desirable) car, as well as the bane of many a videogame: clunky old semi-realism. As a result the game demands an investment of time before yielding satisfaction. **Edge** suggests that racing fans should make the investment.

Where Namco adds depth with a huge range of cars and extensive customising options in *Rage Racer*, *Challenge*, being constrained to faint variations on the one car theme, builds in subtle control nuances and a fairly translucent character smokescreen – instead of choosing between different cars, you choose drivers. These are a self-consciously hip bunch of hackers, models, architects and the like, and even come complete with different levels of indifference, love or hate between each other. And, thanks to the Boxster convertible, Sony has been able to at least attempt to wedge some more variation in with a spot of superfluous motion-capture, giving each driver a range of signature moves. More pertinently, they all have their own driving styles. From unpredictable Italian Marco (a mechanic) to consistently aggressive Swedish model Rachel, players will come to know each of their competitors all too well. More importantly still, each car does handle slightly differently – hacker Taka-bo seeming to have been lumbered with a frightening amount of oversteer, for example.







Because of the evenly balanced cars, shunts like this are frequent but all too brief affairs (left). Though verges slow your car down in the traditional punishing manner, the effect isn't as severe as in some games (centre). Trackside details are sober but impressively realistic (right)

However, there's no denying that, even with the easily attainable 'secret' black Test Driver car, *Challenge* lacks variety. Which is where those controls come in, and to the rescue. There's a real feeling of weight to the steering, and although this may be offputting to the casual player, committed racers will soon become familiar with the more twitchy aspects of handling. Heavy cornering means that not only will you have to go to the trouble of learning the courses, but you'll have to delve into SCEE's impressively deep and authentic-feeling control engine. Long corners will see the back end of your car slipping subtly, and experienced racers can use a combination of brake and throttle to enter the sort of subtle drifts that put Namco's sledgehammer slides to shame (if *Challenge* gets the right amount of exposure in Japan, its notoriously drift-happy market should love it). Firmer application of the brakes provokes more extreme skidding, and you'll have to get to grips with some sideways motion and punchy throttle use to get

Once you get towards the quicker times on the course of your choice, the engine's depth means that you'll actually feel as though you're driving on the edge

around the game's many tight corners quickly. Add in a frightening handbrake and you have a much nippier racer than first impressions suggest.

The courses themselves also give the game a valuable longevity boost. While the initially selectable tracks are less than inspiring, they open up into longer versions of themselves as games progress and, better still, become 'interactive'. Each circuit contains many shortcuts which, on any given lap, may or may not be open. Miss one when it's accessible and you'll generally find the CPU drivers not making the same mistake and merrily skipping past your car.

The twoplayer split-screen mode performs well, but isn't quite as exciting as such affairs can be. The sim-style approach is a real handicap here, as races are more often decided by one or two momentum-sapping mistakes than any stunning overtaking manoeuvres or barging skullduggery. On the other hand, the same precisely weighted approach pays dividends in the true racing fanatic's mainstay, the Ghost Mode. Once you get towards the quicker times on the course of your choice, the fantastic depth of the engine means that you'll actually feel as though you're driving on the edge, experimenting with different racing lines, drifts and verge-cutting detours.

If the rollercoaster courses and binary quick-draw handling of Namco's games leave you cold, try SCEE's take on the genre: its subtle control nuances and challenging depth work excellently.

Edge rating:

Eight out of ten





Take-bo, in the red car, suffers from more than a touch of oversteer (top). The alpine level hump jump (above)







From top: flying cones, the racing game genre's greatest cliché; the Japan course features misleading corners; ignore these roadside signs



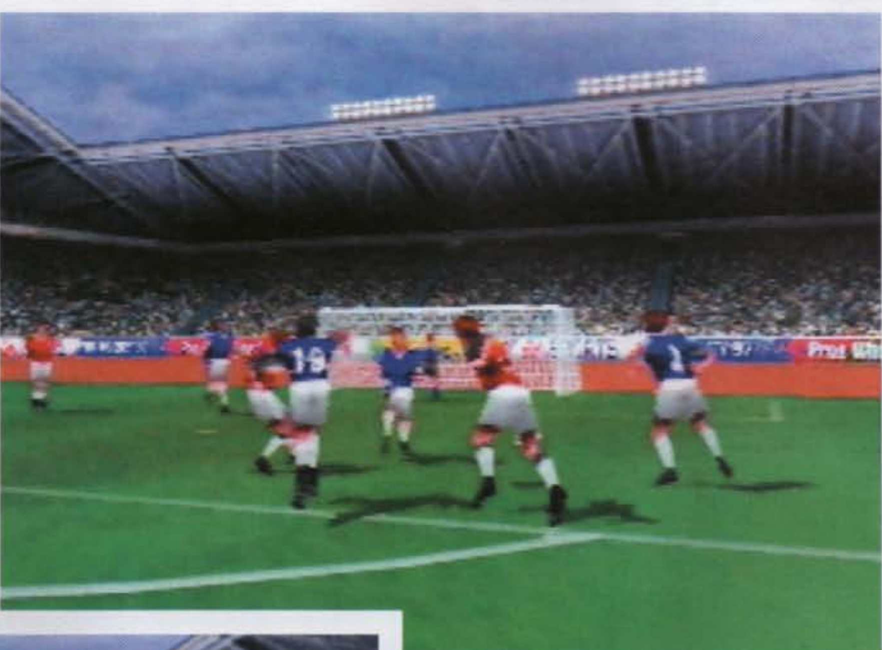
On any of the game's innovative 'interactive' courses, barriers such as these may appear on one lap only to disappear the next. The player must look out for any potential short cuts

Format: **PlayStation**	Publisher: **SCEE**	
Developer: **Inhouse**	Price: **£40**	Release: **Out now**

FIFA 64









The imposing stadiums lend *FIFA 64* a big match atmosphere that, sadly, the game fails to rise to







Overhead kicks, volleys and other extravagant moves are available in *FIFA* but the overburdened control system means that luck can play as much of a part as design

Despite being universally savaged by critics three months ago, EA's *1997 FIFA* refurbishment on the PlayStation still managed to perform incredibly well sales-wise. That is, of course, a testament to the strength of EA in the marketplace and the FIFA brand name it has built up. Although, it has to be said, previous *FIFA*s, stretching all the way back to the original isometric-3D Mega Drive game, have never been world beaters. And the fact that only Gremlin's *Actua Soccer* offered any kind of opposition on Sony's machine surely helped.

On Nintendo's machine, however, a remarkably high standard has already been set by the astounding *J-League Perfect Striker*. Indeed, Konami's title could possibly qualify as the finest interpretation of football on any format. Still, the solid team of John Motson, Andy Gray and Des Lynam together with the enviable chance to play in international competitions and the Premier League give *FIFA 64* something that *J-League* cannot match.

However, this only makes the end result all the more disappointing. It's not that *FIFA 64* is any worse than its 32bit predecessor, but considering the unmatched and already proven potential of the N64 in the footballing field, the player could be forgiven for expecting more from EA's stalwart licence.

Prior to a match, there are tactical screens with different formations, starting line-ups and individual player positions for perusal. *FIFA*'s options are disappointingly limited, though. For example, there are only six formations, including a blatantly misguided Sweeper system where four defenders play across the back. Still, there is just enough scope to tailor your









***FIFA 64*'s graphics and array of camera angles may look enticing, but ultimately it's the on-pitch action that counts. Or rather doesn't, in this case**

own team to how you see fit before taking to the pitch.

Shamefully, it's on the pitch where *FIFA 64* is lacking. The new features run to double figures but are largely cosmetic. Most radical is the 'Picture-in-Picture' camera facility which adds a small rectangular screen in the top right of the screen. A twist on the more traditional radar screen, it's meant to give the player a better idea of players' on-pitch surroundings but really only serves to further confuse proceedings.

Other new inclusions are similarly pointless. There's the 'N64 Cam', which is essentially a less impressive version of the standard 'Tele Cam'; isometric tactical screens; and some daft goal nets which burst out several metres when a goal is scored.

But the real problem with *FIFA 64* is its game engine. It suffers from the same problem as the PlayStation incarnation in that it lacks any sort of pace. Once an opposition player has swept past you, it's unlikely you'll ever catch him as the weak speed-up and flawed tackle controls conspire against you.

In fact, every problem that dogged the previous version of *FIFA* reappears here. The controls seem inconsistent, with the shoot and pass buttons sometimes operating a part of your player's repertoire that you really hadn't intended to discover. And, like too many incarnations of *FIFA*, it's easy to score time and again from the same position. Slide diagonally into the penalty area and there's a nigh-on certain chance you'll hit the target. Just as irritating is the fact that, if you leave a player for any amount of time, he'll take it upon himself to try and tackle even if you hadn't instructed him to do so. Consequently, your players often find themselves out of position as a member of the opposition glides past their half-hearted foot-ins and penetrates the penalty area.

Visually, *FIFA* has undergone some welcome surgery but, once again, the results are less than satisfactory. Because of the N64's ability to generate cleaner-looking polygons, each player has been smoothed out and refined. This makes animation less robotic but unfortunately gives players a strangely fuzzy appearance. Using the closer cameras, such as the 'Shoulder' or 'Ball Cam', solves this problem somewhat but the more playable 'Tele Cam' has an unnecessarily hazy look. Ultimately, after concentrated play, players will begin to yearn for the sharp-edged footballers evident in the PlayStation version.

Playing *FIFA 64* is something of an anti-climax, then. In development, this sounded like an excellent addition to the N64's growing CV but, in practice, it's often disappointing. Whereas *J-League Perfect Striker* gave each joypad button a use, *FIFA 64* commits the cardinal sin of having combinations of buttons perform different moves, which causes a great deal of frustration. Trying to make console-based football as varied and realistic as possible is very important, but so too is providing the player with an intuitive and creative set of controls. Crucially, *FIFA 64* fails to reconcile these two key factors.

N64 football fans are advised to wait for the June release of Konami's *International Superstar Soccer 64* – the European version of *J-League*, complete with domestic teams – rather than paddle in these waters. The coup of having three big-name commentators and the allure of the Premier League may well prove too much for some but invest money in *FIFA 64* and you're likely to end up ruing a hasty decision.

Edge rating:

Five out of ten







***FIFA 64*'s more cosmetic camera options (top) are next to useless ingame, but some, like the 'Ball Cam' (above), certainly enhance the action replays somewhat**

EDGE		
Format: **Nintendo 64**	Publisher: **Electronic Arts**	
Developer: **Inhouse**	Price: **£60**	Release: **Out now**

Tenka







All of the adversaries, aided by their polygonal make-up, attempt to terrorise the player (left). Unfortunately, they rarely manage to shock in proper gameplay terms. An aggressive, gold-plated assailant pops up in of the game's many corridors (right), begging to be downed by gunfire



One of the game's strongest points is its effective use of texture maps and ingenious lighting effects

Since *Duke Nukem*, the race has been on to produce faster engines, with more of the up-and-down perspective movements and jumping and crouching that seemed the obvious next step. Sadly, on the PlayStation at least, all these new degrees of freedom have rarely managed to produce an experience as immersive and atmospheric as the strictly eyes-first *Doom*. *Tenka* is a case in point.

The game boasts polygon-generated enemies with smooth texture maps. It also flaunts some effective lighting effects, true 3D levels, and the sort of complex control freedoms described above. So why is *Doom* still **Edge**'s preferred PlayStation first-person shooter, despite its relatively primitive controls and visuals? Where *Doom* trawls tightly confined tunnels, but also traverses wide-open death-filled spaces, *Tenka* sticks rigidly to a series of interlocking corridors. While *Doom* builds atmosphere and sharply punctuates it with sudden bursts of ferocious action, *Tenka* steadily rations a small selection of thinly spread cyber brutes. *Doom* can be a scary game experience. *Tenka* is mildly claustrophobic.

Developers wishing to make the most of a more flexible engine could do a lot worse than look at how id's own attempt, *Quake*, works. *Tenka* would certainly have benefitted from at least the odd multi-layered, relatively open level, where a glance downwards exposed obliviously patrolling monsters and attacks from above are always a possibility.

Tenka is also unusually linear, with very little of the doubling back that most examples of the genre demand and, indeed, thrive on.

Not that *Tenka*'s a bad game, not by a long chalk. It *is* a good-looking piece of software, and solid enough in most departments, but like almost every *Doom* wannabe, it lacks the focus, atmosphere, and, vitally, level design of id's old master.

Edge rating:

Seven out of ten







That same golden child receiving the correct punishment (left). *Tenka*'s main areas of open combat are simplistic, square rooms (centre). Despite its failings, there's no getting away from *Tenka*'s speed and impressive graphical use of three dimensions. Or, in fact, this brute (right)

Format: **PlayStation**	Publisher: **Psygnosis**	
Developer: **Inhouse**	Price: **£45**	Release: **Out now**



Manx TT



CPU players crash convincingly, but fallen riders will be back on your tail in seconds, unconvincingly



Conversion duties for *Manx TT* were given to Australian codeshop Tantalus. The team's 3D engine performs quite adequately, and the game maintains a respectable frame rate

It seems that, more often than not, motorcycle racing games are the poor relation of their four-wheeled cousins, always appearing to follow a standard formula: take the engine of a successful car race smash, replace the car graphics with bikes, replace the controls and generally make things lean about a lot more. At least, that's what *Manx TT* feels like.

There's no arguing with the pedigree of Sega's previous racers, of course, but *Manx TT* is something of an oddity. The arcade original was a showy beast but more of a novelty than a necessity. The Saturn conversion is the same, only more so.

Manx TT offers two circuits, the Laxey and the TT, both of which reappear mirrored and reversed once the basic game is mastered. Laxey is the starter track, a swooping series of wide bends with a finish along a coastal road. TT is more in the classic image of the famed Isle Of Man races with a circuit that tears through little villages. Completing the lineup is an array of bikes which trade off the standard handling, acceleration and top speed with each other.

All the elements for a successful racer are here in *Manx TT*, yet the twitchy, oversensitive controls do make it a trial to play well on the Saturn. It's very hard to follow the racing line with the Saturn's pad as all you can to do is keep nudging it in one direction or go the whole hog and lean in for a sharp turn. So great is the oversteer that just driving a 'clean' lap without scraping the barriers is an achievement at first.

A much better option is the Saturn's analogue pad or steering wheel. The former still suffers from oversteer but is far more manageable, the latter, if anything, understeers. The use of such peripherals doesn't make the game, however, merely salvaging it. It remains a second-row racer and can be enjoyed, if only as above-average sustenance during the wait before the next supercar comes along. E

Edge rating:

Seven out of ten

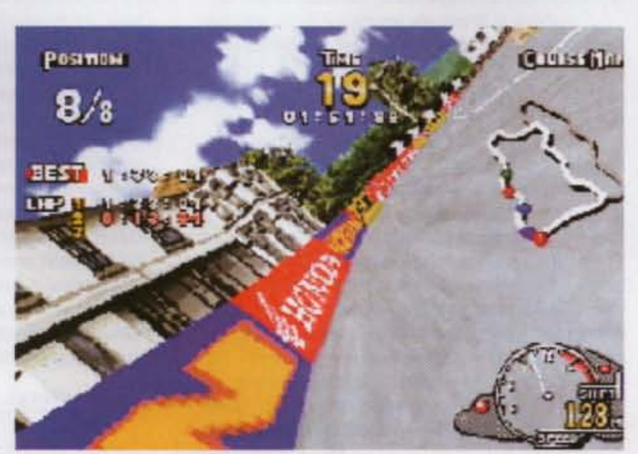




In a typical console compromise, the split-screen twoplayer mode sees detail cut down in the distance, occasionally making it difficult to prepare for corners



The scenery in the game provides the usual selection of driving game components, including a tunnel (above). The first-person view (right) provides the most realistic-feeling racing experience, although standard controls spoil proceedings somewhat



EDGE			
	Format: **Saturn**	Publisher: **Sega**	
	Developer: **Tantalus**	Price: **£45**	Release: **Out now**

Sentient







The use of small talk enhances the feeling of exploring a living environment, but flaws in conversation are often visible. The player can sometimes listen in on other conversations (left)







Set pieces (above) intersperse the freeform action, lending a filmic air

A science-fiction epic boasting a realtime 3D environment, complex personality modelling, advanced sentence-based communication and a multi-faceted script. On paper, *Sentient* has all the appeal of a next-generation console title. And yet the sensations invoked by the game recall the classic adventures more than anything. This is simply the latest attempt to do something new with the graphic adventure format.

The plot throws the player into the unstable environment of a space station hovering on the edge of a far flung star, where the immediate dangers of dying through asphyxiation or at the hands of security personnel are soon replaced by more subtle perils.

Something is drastically wrong out there, and the repercussions are beginning to have an effect on the 200-odd crew of the station. Naturally, it falls to the player to unravel numerous subplots and conspiracies in pursuit of the ultimate truth.

The two methods of progress are communication and object manipulation. The latter reinforces the idea that this is simply a well dressed adventure game, the initial stages setting the style, as the player is charged with locating a lost radiation report and handing it over to the right person. It's the interaction with – and independent actions of – the other characters on which *Sentient* really hinges, however. Some deft character modelling techniques have been used, ensuring that the protagonists all go about their regular business, make idle chit chat and discuss important issues with each other, and respond to the player in the correct manner. There are obvious flaws in behaviour and responses, but the overall effect is quite impressive.

Similarly, the effort invested in bringing a vast space station to life has paid dividends. Exploring the levels, rings and quadrants of the station is a major undertaking in itself, a task made easier by the graphical diversity of different locations and the ability to obtain directions from other characters.

More problematic is the communication system. A multiple menu system makes it possible to ask questions about people, locations, items and topics, as well as make statements, show emotions, give commands, etc. But attempting to navigate these menus using the PlayStation's controller proves a real pain. It soon becomes obvious why such ambitious communication methods haven't been attempted in a console title before – it simply isn't practical.

Then there are the lengthy periods spent traipsing up and down the station's corridors in search of some character who continually moves from one location to another, only to find them and discover that they don't possess the information or item needed anyway. The game starts to resemble a wild goose chase with clever personality modelling rather than a cohesive, tightly paced cinematic experience.

Sentient is a unique and innovative experience, but its flaws serve to illustrate the fact that interesting doesn't always equal enjoyable. A thriller that isn't particularly thrilling is the unfortunate result. **E**

Edge rating:

Six out of ten

EDGE			
	Format: **PlayStation**	Publisher: **Psygnosis**	
	Developer: **Inhouse**	Price: **£40**	Release: **Out now**

Comanche 3









NovaLogic's new Voxel Space 2 rendering system can effortlessly create rolling hills, deep valleys and transparent water. The technology can, however, take a toll on PC performance

Hot on the texture-mapped heels of its impressive jet simulation, *F-22 Lightning III*, NovaLogic's new chopper game *Comanche 3* marks the second outing for the company's Voxel Space 2 terrain rendering system. While the original Voxel 3D engine fractal technology, used in *Comanche: Maximum Overkill* and the tank sim *Armoured Fist*, was blocky, indistinct and downright ugly, VS2 is smoother, clearer and twice as fast. Playable in SVGA graphics modes up to 800x600 and providing support for high-tech white elephants such as the VFX1 VR helmet and stereoscopic 3D glasses, Novalogic's simulation of the RAH-66 Comanche attack helicopter is – graphically, at least – cutting-edge software.

Visual detail is excellent – gorgeously texture-mapped hills and valleys disappear into a fog-hazed distance, snow-capped mountains are edged by dense tree-lines, while translucent smoke clouds billow into a lens-flared sky. It's the attention to ground detail that's so striking, though, the VS2 engine defining small features such as tents and wooden watchtowers, as well as a wide array of hot military targets like Hind gunships, SCUD missile launchers and T-80 tanks.

With over 30 challenging missions, split into four different campaigns, plus multiplayer options that enable flyers to indulge in twoplayer cooperative missions, as well as free-for-all network warfare with up to eight players, *Comanche 3* has gameplay in spades. It's not just its looks that have undergone a makeover either: while the original game was an arcade fly-and-fight spectacular, *Comanche 3* embraces the hardcore simulation ethic with unbridled enthusiasm.

It's now impossible to adopt carefree tactics, hurtling fearlessly over the undulating terrain like a modern-day Airwolf – that was the old *Comanche*. While the helicopter in *Comanche 3* is easy to fly and realistically modelled, an understanding of modern helicopter tactics is more useful than quick reflexes. Like most modern aerial warfare, the most successful strategy is to avoid being seen by the enemy; stealth is the key. *Comanche 3*'s missions aren't always fun and action-packed, but they are a realistic recreation of modern chopper combat. Fortunately, aerial no-hopers can use the interactive training missions, which teach beginners the basics of navigation, terrain-masking, and air-to-ground and air-to-air interdiction.

If there's a criticism, it's that all this lush extravagance and attention to detail exacts a hefty price. Even running the game in the standard 640x480 SVGA mode demands a lot of a Pentium PC, so much so that potential buyers should be looking at setup spec of at least 166MHz.

Comanche 3 abandons its arcade shoot 'em up roots in favour of a more serious slant. It's graphically superior to DI's *Apache* and *Hind* sims, and easily on a par with EA's definitive *Longbow* effort – although it lacks the depth.

Ultimately, *Comanche 3* strikes just the right balance between seat-of-the-pants flying and the heavyweight demands of simulated realism. 

Edge rating:

Seven out of ten

Format: **PC**	Publisher: **NovaLogic**	
Developer: **Inhouse**	Price: **£45**	Release: **Out now**



Kick Off 97







In addition to all the in-vogue 3D views (often pretty but totally unplayable), *Kick Off 97* has a fluid overhead 2D mode (above) for *Sensible Soccer* purists

3D football games seem to be de rigeur nowadays, but although they often look and sound good, they've become increasingly difficult to play. Give *FIFA* ten minutes and anyone can perform the range of headers, bicycle kicks, long passes and throw-ins. But they probably won't know *how* they did them – frantic, random joypad hammering is often enough to whack the ball forwards in the vain hope of sneaking a lucky goal. Stand back from the main *FIFA/Actua* battle and it's easy to see that both games are actually more concerned with top-drawer graphics, realistic animation and new 3D technologies. Just what happened to good, old-fashioned playability?

At first, new 3D arrival *Kick Off 97* seems no different. All the usual football features are here – auto-replays, multiple camera angles, goal celebrations and motion-captured player animation (Anco drafted in Arsenal players David Seaman, Patrick Viera and Ian Wright to provide the raw data). The *Kick Off* player can choose to play in league, cup competitions and friendly matches; there's even a practice mode allowing the taking of endless corners and penalty kicks, or to rehearse set piece moves unhindered by opposing defenders. In addition, almost every aspect of the game can be adjusted – the game has two play modes, Arcade and Simulation; pitch surfaces and weather conditions can be randomised or predefined; while there's also a team editing facility, allowing anally retentive fans to change player names and redesign football strips. In terms of options, *Kick Off 97* has practically everything.

But options are never a football game's problem. *FIFA* and *Actua* have become the PC football games of choice, but they've required a hefty Pentium processor to get the best out of them. *Kick Off 97* is a little kinder to hardware. The game may initially look a little bland and *FIFA*-esque, but this is one soccer sim that can maintain a decent 20fps update without haemorrhaging a processor. *Kick Off*'s main advantage is that it's fast and playable, and together with digitised commentary from ITV's Jim Rosenthal, plus some good in-game visuals and menu presentation, it's easily on a par with its competition.

Refreshingly, Anco has been careful not to sacrifice any enjoyment for throwaway eye candy, and in addition to the isometric 3D playing views it has thoughtfully included a *Sensible Soccer*-style overhead affair. This zoomed-out view allows the player to see more of the pitch, to plan sweeping moves and defensive tactics. It may not be pretty, but its inclusion will appease those yearning for the visually-perfunctory-but-playable values of *Sensible Soccer*.

Fast-paced and exciting (shame about the occasionally dodgy Rosenthal voiceover), *Kick Off 97* is a game that might snap the *Actua*s and *FIFA*s out of their complacency. A champion of gameplay, with 3D frills that won't cripple a PC with their flashiness, this is a sound PC football title.

Edge rating:

Seven out of ten

Format: **PC**	Publisher: **Maxis**	
Developer: **Anco**	Price: **£40**	Release: **Out now**





Fast 3D action without crippling your PC: *Kick Off 97* easily matches the 3D delights of *Actua* and *FIFA*

Excalibur 2555AD







There's no denying the impressive nature of graphical effects employed, but *Excalibur's* shallow approach to its quest spoils the party



Ever since Infogrames kickstarted the genre with *Alone in the Dark*, the 3D graphical adventure has been pushed in different directions by developers the world over.

Telstar's stab sees a female adventurer exploring 13 levels comprised of a network of rooms and corridors on a single 2D plane. The chambers look wonderful, the PlayStation's lighting effects bestowing coloured glows which are perfectly transferred to objects and characters as they pass by. The choice of camera, from smooth tracking *Tomb Raider* style to a panning and swooping (though far from playable) remote is certainly impressive and the rapid appearance of rooms is a blessing after *Resident Evil*'s tiresome door-opening lags. However, five minutes of play will reveal that although everything appears 3D, (your character wanders around, varied attackers blunder in swirling clubs and swords) one of the available three dimensions simply doesn't get a look in. *Tomb Raider* didn't require a map because of the unique features of each of its levels. Here, where the levels are made from box-shaped rooms placed side by side, each with unremarkable contents, the compass and auto-map are essential.

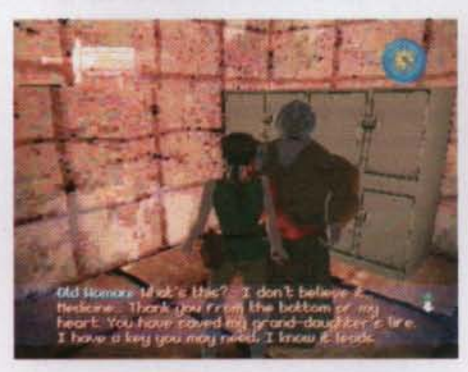
Doing battle with the level's occupants also fails to generate the excitement it should. Three sword swipes and a blocking move are available (plus some combo moves, achieved by a series of button presses) and all are quickly mastered which sometimes makes the occasional interruption from attackers more a chore than a pleasure. Also, attacks may be completely avoided thanks to the fact that enemies never give chase outside of their rooms and, most disappointingly, in cases where more than one assailant leaps up, they attack in turn, passing the combat AI routine between them as each one expires.

Perhaps the game's greatest failing is its RPG aspirations. The successful completion of a level involves a limited, linear process: static characters you meet will ask for an object; you later find that object, return, hand over your booty and are rewarded with another object required by another character. After five or six such interactions you'll earn the key to the exit and you're off again.

Excalibur's premise held much potential, but the finished game fails to fulfill it, leaving something whose uncomfortably restrictive limits tarnish its clean presentation and fine atmosphere.

Edge rating:

Six out of ten



These text messages are also delivered in audio format, having been recorded by voice actors





The combat system itself is fairly enjoyable, but the enemy AI routines are rather predictable

EDGE			
Format: **PlayStation**	Publisher: **Telstar Electronic Studios**		
Developer: **Tempest**	Price: **£45**	Release: **Out now**	

Theme Hospital



Detailed information on staff members is instantly available, with the opportunity to pluck them out of their current environment and drop them elsewhere in the building if necessary







As money is amassed, new sections can be built, such as this hair-restoration clinic (above)

While *Theme Hospital* shares the Designer Series label and basic management directive with predecessor *Theme Park*, it is in fact a world apart from that revered title.

The complexities offered by giving the user free reign over the actual layout of their medical establishment is made yet more complicated by the staff-management aspect of the design, where control of the doctors, nurses, receptionists and caretakers is at best indirect. The interplay between these two aspects tends to rob the game of a clear-cut playing method, but ultimately adds many new levels to the management challenge.

This is a game environment where the staff go about their business independently, adapting to the user's hospital architecture, the pressure they're put under, and the facilities available – be they operating rooms, pharmacies, rest rooms, toilets, or one of the comical treatment rooms. It's the latter element which is played to the hilt, with ailments such as invisibility, heaped piles and hairyitis having to be diagnosed and treated accordingly.

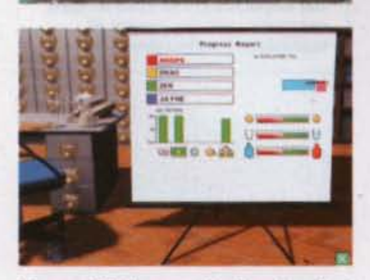
The isometric viewpoint, a keen compromise between clean functionality and cartoon stylings, works well, while a sleek control system removes much of the potential confusion when it comes to actually building the various hospital rooms and wards. The approach to the hospital staff is similarly well handled, making it possible to instantly check up on a doctor's abilities, energy, and enthusiasm.

It is of course the well-tuned balance of in-patients and ailments versus limited resources that makes *Theme Hospital* such a compulsive experience.

In truth, this is a refinement rather than a complete reinterpretation of the genre. The sense of helplessness induced by having so many characters roaming independently around the environment does occasionally frustrate, but such confusion is really a necessary by-product of the ambitious design. Few games can boast of a teeming gameworld governed by so many subtle variables, yet all under the influence of the player. That *Theme Hospital* is as rewarding to play as it is technically admirable is a genuine achievement.

Edge rating:

Eight out of ten



It's possible to compete via network play, while solo players take on CPU-controlled rival hospitals

Format: **PC**	Publisher: **Bullfrog/Electronic Arts**	
Developer: **Bullfrog**	Price: **£40**	Release: **Out now**

Sangoku Musou









***Sangoku*'s backdrops are disappointing, their static, digitised nature lacking even a single layer of parallax, let alone simple spot effects**







The Three Kingdoms era of Chinese history so relished by Koei has also lent its flavour to *Sangoku*. Each of the characters wears traditional costume and wields credible weaponry

Koei's first 3D fighting game is slightly better than many expected from a wargame developer – although it joins a growing list of titles that might be called the Children of *Soul Edge*.

The counterfeiting process begins with a game engine that flagrantly borrows reversals, guard impacts and counter stuns. At least the motion capture has integrity, with some acrobatic jump-in attacks that carry better weighting than most other 3D titles. A few quirks have crept in – clockwise-only sidesteps, for instance, and idiosyncratic (sometimes plain cheesy) okizeme stay-downs. But the dearth of truly impressive special moves is a shame, as only certain throws and super moves can ever wrench the camera away from its stubbornly side-on viewpoint.

Those super moves, or 'Musou', are enabled by the filling of a secondary energy bar, and result in a flurry of strikes trailing that now-familiar weapon glow. All too often they seem to obey Deuce's Law of Inverse Vocal Power: the more impressive your attack sounds when called out, the less likely it is to hit, or to do significant damage when it does.

Ultimately, *Sangoku*'s stumbling block is its limited scope. Like *Soul Edge* and its proliferating clones – and quite unlike *SFII*, in any incarnation, or even *Tekken 2* – there's not enough room to develop your own sequences and move combinations outside of its preset combos. That's not to say *Sangoku* isn't capable of delivering an enjoyable twoplayer experience, but the pleasure is ephemeral.

Big-name investment in the lucrative field of 3D fighting games has delivered some truly splendid cutting-edge titles that demonstrate the potential of 32bit game development. Consequently, it's a tall order for a newcomer to compete with any hope of success. By brazenly imitating a considerably better game, *Sangoku* practically relegates itself to average status and is thus unlikely to find prominence among so many rivals.

Edge rating:

Six out of ten



The viewpoint only rarely breaks away from a side-on perspective

Format: **PlayStation**	Publisher: **Koei**	
Developer: **Omega Force**	Price: **¥5,800 (£30)**	Release: **Out now (Japan)**

F1



***F1*'s outstanding graphics put its 32bit consoles counterparts to shame. The exhaust-stained tracks and packed grandstands (left) are matched by the sweeping background landscapes (below) which give the game a real-world feel that other racers lack. Spot special effects are similarly impressive**



PlayStation *F1* was, of course, a best-seller on the machine. But Sony's format is one where the competition is just about non-existent. The PC, conversely, already has a sterling benchmark in the form of Geoff Crammond's *GP2*, leaving Psygnosis' game with an uphill climb, to say the least.

Provided you can ignore the difference in price of the required equipment (£130 for a PS, at least £1,200 for the required PC and 3Dfx card – Diamond's Monster3D is recommended), *F1* 3Dfx is, visually at the very least, utterly incredible. Apart from the short-lived, single-track, instant gratification of *Ultimate Race* (bundled with VideoLogic's Apocalypse3D card), nothing on the PC is as visually as impressive as this game. As well as the 3D card requirements, though, be prepared to throw some megahertz at the game: a P100 will draw in backgrounds uncomfortably late, but a P166 and upwards provides a satisfying race.

As for the game, it isn't as complex or as satisfying as MicroProse's *GP2*, a game Psygnosis is anxious to avoid a head-to-head with, but with which comparisons are inevitable. Instead, *F1* is a more immediate game, but one with more than a fair nod towards car setups and realistic collision dynamics.

It's still tremendously entertaining, but has less staying power than its unaccelerated forebear. (A DirectX version is due next month, incidentally.) E

Edge rating:

Eight out of ten

Format: **PC 3Dfx** (also PlayStation)	
Publisher: **Psygnosis**	Developer: **Bizarre Creations**
Price: **£40**	Release: **Out now**

Testscreen round-up

Exhumed

PlayStation

Publisher	BMG Interactive
Release	Out now
Price	£45

A first-person 3D shoot 'em up, *Exhumed* confidently flaunts its *Doom* influences from the word go. Here, though, that's not such a bad thing.

Egyptian mythology figures heavily in the plot as your task involves rescuing a kidnapped Pharoah mummy, visiting a plethora of outdoor and indoor locations in the process. The game's 3D engine runs at a gloriously smooth pace and the visuals in general are excellent, being far more varied than PlayStation rivals *Doom* and *Alien Trilogy*, with authentic tiling effects and hieroglyphic doodles.

It's noticeably tough, too, with some levels taking up to an hour to complete, and there are a fair amount of puzzles involved (sandals must be collected in order to hop heights, and a mask to breathe underwater, for example). *Exhumed* is essentially but another 3D shooter, albeit one which has had care lavished upon it in heaps.

Edge rating:

Eight out of ten



Total NBA '97

PlayStation

Publisher	SCEE
Release	Out now
Price	£35

Total NBA '96 was the first PlayStation game to come out of Sony's London office, and it remains a benchmark simulation, combining fabulous visuals with honest sporting endeavour. In short, it was a game that 'worked', something that took the genre to greater heights.

This sequel smooths out the edges of its predecessor and includes revamped graphics and all-new motion-captured animation (courtesy of NBA pro Latrell Sprewell). Player movement is incredibly slick, while the photorealistic faces that now adorn the players add even more to the atmosphere.

Although Sony is keen to point out that *Total NBA '97* is a *new* game, anyone who's played the original will find a comforting familiarity with the sequel. It still plays a beautiful game of basketball, only it looks much better. *Total NBA '97* is, therefore, an absolutely essential sports sim.

Edge rating:

Nine out of ten



Ultimate Race

PC PowerVR

Publisher	Bundled with PowerVR
Release	Out now
Price	£35

As a technical demonstration of the PowerVR chipset, *Ultimate Race* could well be the retort PC owners have been waiting for to silence their console-owning peers. Due to the nature of the chipset, only owners of P200 MMX machines will be able to get the most out of it, but then you do get sumptuous 16bit colour running in a resolution of 800x600 and at a healthy 25-30fps. Where most PC developers fall down – composing visuals deserving of such technology – French codehouse Kalisto (see page 42) has excelled, and the result is a beautiful-looking racing game, almost approaching coin-op standards in design terms. *Ultimate Race* handles well, too, but the fact that, a) the game is only available with the card, and b) it only has a single (albeit huge and varied) track means it would be unfair to assess this as it anything other than a glamorous and highly playable demo.

Edge rating:

n/a



Pod

PC 3Dfx

Publisher	UbiSoft
Release	Out now
Price	£45

UbiSoft's futuristic racing game, specifically designed with MMX in mind, certainly gives some indication of the technology's power. Sadly, it does precious little else.

The wastelands and post-industrial cityscapes that make up *Pod*'s circuits are impressive on the surface, moving smoothly and very quickly, but in design terms they are uninspiring – often uncomfortably angular, with large, slab-sided walls and canyons with a single texture slapped on them. The vehicles fare little better, their designs looking more like '70's visions of futuristic cars than what is expected today.

The racing itself is similarly disappointing: handling is flat, and it rarely feels as though you're fighting for grip and wrestling to maintain control of a car, merely pointing a chunky model around a fast-moving landscape. A fascinating demo of 3Dfx power, then, but too shallow to recommend.

Edge rating:

Five out of ten



Mass Destruction

Saturn

Publisher	Sega
Release	Out now
Price	£40

With transparencies and other such effects currently de rigueur for console games, some would think it inevitable that Sega would seek to acquire rights to BMG's explosion-packed shoot 'em up. However, while *Mass Destruction* shows that the Saturn's oft-maligned technology is capable of better than conversions such as *Reloaded* may suggest, it still subscribes to the style-over-content cause.

That players can destroy almost every standing structure with an impressive array of weaponry is initially pleasing, but the appeal of using a flame-thrower to torch a building soon begins to wane and it's during this period of play that the game's shallow structure and poor opposition AI become apparent. Twenty-four levels, each with simple objectives and invariably banal encounters with opposing forces are what Sega got for its pound of flesh. Saturn owners will expect a lot more.

Edge rating:

Six out of ten



Grid Run

Saturn

Publisher	VIE
Release	Out now
Price	£40

Grid Run forms part of the growing action game genre which involves collecting flags and outwitting your opponent. Set in the outer reaches of space, the player has been tricked into a cosmic game of tag against a variety of opponents ranging from cumbersome androids to the more fiendish cyber dinosaurs.

Employing Mode 7-style backdrops mixed with the Saturn's effective sprite-handling, *Grid Run* is graphically impressive, fast and offers some cleverly designed maze environments.

Although fine as a oneplayer game, it's against a friend that *Grid Run* excels as both parties race to collect flags and avoid being tagged 'it'. There are plenty of power-ups to collect as you aim to slow your opponent down and reach the finishing line and, although not a technical marvel, *Grid Run* remains an entertaining title nonetheless.

Edge rating:

Seven out of ten



Gallery

The CGI aspect of videogaming is perhaps its most diverse, its components ranging from futuristic technology to fantastical lifeforms. This month **Edge** looks at a wide range of images which fall squarely within the latter category



Odd World: Abe's Oddysee **is an innovative take on the platform genre, emphasising the individual personalities of the game's inhabitants as a key element of the action. As Lorne Lanning, director of developer Odd World Inhabitants, points out, 'Our drive is to create unique lifeforms that look, play and behave like living beings. Achieving this means massive manipulation of graphics technology as it always wants to be stiff and lifeless.'**

This emphasis on realism is something the artists obviously took on board when designing these images. Both Abe and his monstrous accomplice (left) are intricately drawn, with a strong emphasis on muscle tone, while the landscapes (below) are full of organic detail

Images created by **Christopher Chevarou** and **Scott Easley** (character animation), and **Jane Mullaney** and **Eric Antanavich** (landscapes) using Alias software on SGI computers. **Cathy Johnson** (digital painter) used PhotoShop on the Macintosh

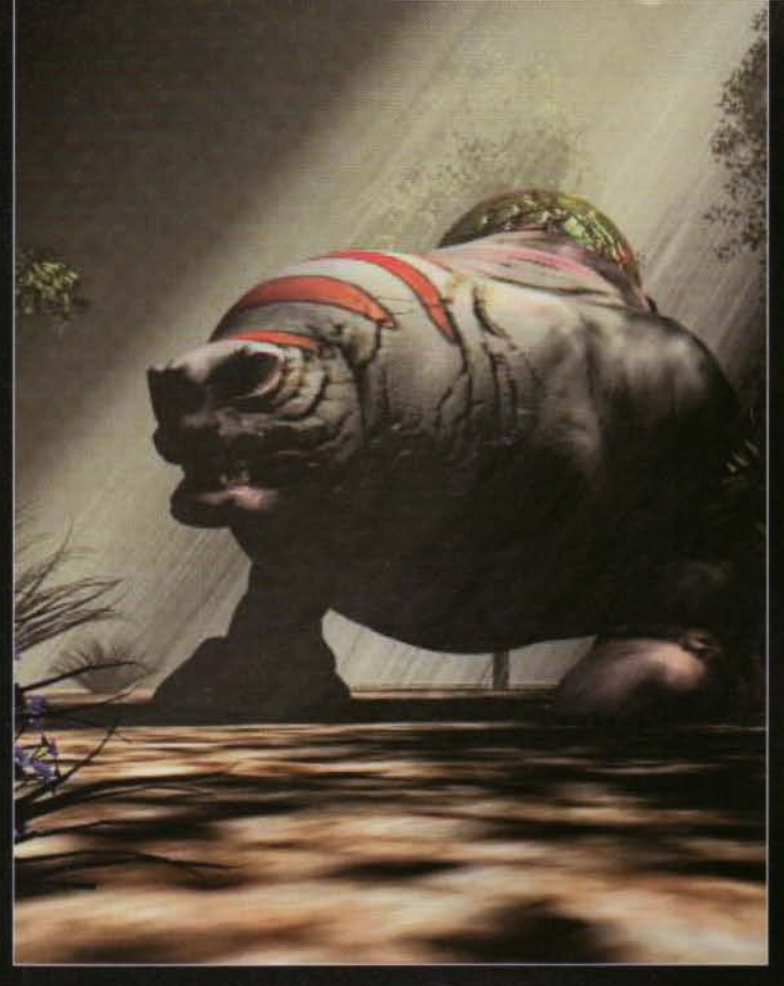
< **Odd World Inhabitants**











Gametek's futuristic military simulation, *Dark Colony*, is set on a distant planet and pits human forces against the extremely weird indigenous lifeforms (known as 'Greys'). Atril (left) was modelled by Ray Larabie with *Metaball Modeller* in *3D Studio 4* to give it an organic look. The textures were roughed out in *Meshpaint* and rendered in *Photoshop*. Greg Bick then built the scene in *3DS Max* and rendered Atril with volumetric lighting.

With the Sydemon (below), Larabie made the body with *Metaball Modeller* in *3D Studio 4*, and the blades, horns and teeth in *3DS Max* ('Crash, reload, wait, crash, reload…'). Each tooth, horn and blade has its own separate bump and texture map. According to Larabie, 'the Grey units are meant to be disgusting. The artillery fires a pus-ball from its butt, the air unit drops exploding foetuses, the mine is a fat octopus. It's meant to make people sick.' It works

All images rendered on PCs using 3D Studio 4, 3DS Max, Metaball Modeller, Photoshop, Meshpaint







Completing a trilogy of PlayStation beat 'em ups for Namco, *Soul Blade* looks set to outshine even it illustrious predecessors – the two *Tekken* games that it appears to borrow heavily from. The game's story mode, based around the quest for the titular *Soul Blade*, boasts some opulent hi-res rendering showcasing Namco's excellent character design. Above, samurai warrior Mitsurugi rests his katana on his shoulder, while Sophita (above right), styled along Classical Greek lines with her short skirt and sandal straps, flourishes her chosen weapons – a short sword and shield. The canyon scene (right) is typical of the high standard set in *Soul Blade*'s story mode





LucasArts has been at the forefront of US PC development for the past ten years, developing classic point-and-click adventures like *Monkey Island* and *Full Throttle* with liberal abandon. Once a relatively small-scale operation, the company now employs around 70 artists, many of whom were drafted on to the company's recent foray into 64bit console games, *Shadows of the Empire*. This Boba Fett image, by artist Jon Knoles, was designed to publicise the game

Boba Fett model created by **Jon Knoles** and rendered in *3D Studio*

Q&A with Jon Knoles

Edge: What was your inspiration for the piece?

Jon Knoles: Boba Fett may have been a minor character in the films, but there's something about him that has made him a cult figure to 'Star Wars' fans. In fact, his popularity is almost as great as Darth Vader's.

The reasons for his fame are as mysterious as he is. Even before 'Empire Strikes Back', we caught a glimpse of this formidable-looking bounty hunter in comics and in the animated portion of the otherwise forgettable Christmas television special in 1978. As a kid I thought he was the meanest-looking thing I'd ever seen. Who knows why? Maybe it's because his costume is so wicked-looking. He looks as if he's been run through the mill a few times, too, judging by his battle-scarred armour.

In the game, *Shadows of the Empire*, I wanted Boba Fett to play a major role, but he ended up as a relatively low-detailed, realtime figure (I think his poly count totals 600). But once the game was completed, I knew we'd need a high-resolution Boba Fett for publications and such, as well as the box cover for the game, which I was also asked to create.

Edge: How did *3D Studio* specifically help in the creation of the Boba Fett figure?

JK: *3D Studio* was the only program I knew well enough to finish the model quickly. It really is a hack job, though, in my opinion. I'm not a very clean model builder. But a careful use of textures really pulled off the image.

I used a 700-polygon human template that I had brought over from the N64 game and smoothed it by multiplying the number of polygons. It was easier to start at a low detail level to better control the shape of his figure. I then made sure I gave him fairly normal features, as Boba Fett isn't a muscular guy by any means. Then I drew what are known as displacement maps (black-and-white topographical terrain-like textures which, when applied to any smooth surface, actually create raised 3D surfaces). I wrapped these maps around his legs to create the folds and pockets of his baggy pants. To save time, I took some things like the gun and the contraptions on his arms from another artist's Boba Fett model. I only had two days to do it, so I just started pressing buttons, certain that it would come out horribly, but was pleasantly surprised at how real he looked once I was finished. Aside from the jetpack thrust and some highlights and reflected lights added in *Photoshop*, what you see in the image is essentially the *3D Studio* rendering.

Edge: What was the hardest part of the render to produce?

JK: The helmet was definitely the toughest part to get right – and the most essential ingredient in making a convincing Boba Fett. I'd seen a few other people's attempts at making a Boba Fett, and while they were decent, they just didn't capture his look. I must have rebuilt that thing five times in five different ways. It basically started with a hemisphere on top of a cylinder. Then I just hacked away at it and punched holes in it and moved vertices around until it looked just right. During all of this, I had background images of Boba Fett reference photos to help keep me on track. Hey, when in doubt, consult your reference!



Kalisto's ambitious sci-fi adventure, *Dark Earth*, is set on an Earth plunged back into the Dark Ages by a huge meteor explosion. Consequently, the game blends visual themes from the present and future as well as distinct medieval swords'n'sorcery elements. The title's chronological eclecticism is reflected in this brilliantly intricate render of Arkan, the player's character, striding away from a massive metallic citadel. If the graphics in the game can match this image in terms of attention to detail and atmosphere, it will certainly be one of the key PC titles of '97

Image created by **Sylvain Dousset**, **Francois Rimasson**, **Olivier Bailly-Maitre**, **Nicolas Villeminot**, **Ralph Musty**, **Jerome d'Aviau de Piolant** and **Animate** using *Softimage* and *3D Studio* on Indy and Indigo 2 SGI machines

Konami and Sega are exploring the lightgun genre with two games of marked contrast, one being military themed, the other bearing schlock-horror values...

Operation Thunder Hurricane





Konami's *Operation Thunder Hurricane* combines the military setting of *Operation Wolf* with the helicopter flight mechanics of *Gunblade NY*



The game includes several sections which involve air-to-air combat. Turbulence may well play a part in making the targets more elusive

The on-rails lightgun genre has so far attracted a steady stream of entertaining titles, despite its obvious limits. For a while, the *Virtua Cop* series, with its slick urban styling and sharply dressed enemies, has defined what the genre should look like. However, the AOU show saw two new games taking this idiosyncratic category and pulling it in completely different directions: schlock horror courtesy of Sega's *The House of the Dead* and war antics via Konami's *Operation Thunder Hurricane*.

Here the player participates in the action from a 'copter sweeping smoothly over a lush 3D landscape. The targets are impressively varied, ranging from army bases swarming with ground troops and heavily armed gunboats to enemy aircraft screaming past in formation. Importantly, the camera swoops and sails between ground and air targets with almost nauseous fluidity, providing the player with an impressively realistic framework for the apparently non-stop action.

What really marks this coin-op out, though, is its characteristic cabinet, featuring an assault rifle that can be wielded freely, and surround-sound speakers which belt out gut-wrenching explosion effects. These factors will no doubt see the game furthering Konami's resurrection as a coin-op force to be reckoned with ■



The game's cabinet is highly distinctive and features three speakers for surround sound





The *Thunder* gun (top) features the usual trigger plus a limited 'smart bomb' option





The visuals in *Hurricane* are finely detailed, with plenty of suitably grubby textures and some fine 3D modelling on the enemy aircraft. Peripheral effects are also impressive, with missiles, for example, leaving realistic vapour trails

Developer:	Konami
Release:	TBA (UK)
Origin:	Japan

The House of the Dead



The relationship between arcade and home videogames is often seen as a one-way transaction, with ideas flowing from the former to the latter and nothing happening in reverse. By borrowing heavily from *Resident Evil*, however, *The House of the Dead* proves that ideas *can* flow the other way.

This is *Virtua Cop* how George Romero would present it if he were a game designer. The player takes on the role of Tom Rowgun, a special agent whose mission it is to search the crumbling building for a scientist who has recently disappeared (*Resident Evil* to a tee, then). Inside he finds a motley collection of beasts – zombies, man-eating frogs, rabid dogs, etc – all queuing up to be blown away. The period decor within, together with the vast menagerie of monsters, gives the game a distinctly Lovecraftian feel, and the designers have capitalised on this gothic-gore factor by filming the plot cutaway scenes in grainy '30s-style black-and-white. On the topic of gore, each of the mansion's inhabitants dies in a different way, depending on where they are hit: chest explosions, flying limbs and gaping stomach wounds are all par for the course.

The game also adds a few choice amendments to the on-rails shoot 'em up genre. Its designers have, for example, tried to give *The House of the Dead* a greater feel of three-dimensional depth by guiding the player up narrow flights of stairs and through tight corridors, as well as including sections where ducking and crawling are necessary. This should combat the 'flatness' of the original *Virtua Cop*, where the action often felt as though it were taking place on a single plane.

The title also introduces a 'multi-story' concept, which is essentially an extension of *V-Cop 2*'s end-of-level route choices. Here, every section includes certain 'key zombies' and the player's route changes depending on whether or not these zombies are killed. Consequently, it is hoped that the title will provide a different experience each time a player comes to it. Also borrowed from *V-Cop 2* is the notion of innocent bystanders. Here, though, players gain extra lives if they manage to save them – particularly fortunate as the game is apparently incredibly difficult.

So far, Sega has revealed only two rather similar-looking sections, but promises some more diverse locations later. Whatever the case, this remains a promising title – it does, after all, have much in its favour: *Virtua Cop* playability, copious amounts of gore (it makes *Resident Evil* look positively U-rated in comparison) and plenty of monsters to blast. The only disappointment is that the game employs Model 2 rather than the state-of-the art Model 3 board. Judging by the atmospheric and detailed visuals, however, the game does not appear to suffer much as a result. E





Despite the use of Model 2 rather than Model 3, AM1 has managed to create an impressively detailed and realistic menagerie of enemies



Sega promises a highly varied selection of locations, including some exterior levels







As in *Resident Evil 2*, creatures are affected differently depending on where they are shot and what with. Rather disturbingly, it's possible to blow body parts off and even create grisly stomach and chest wounds with gunfire

Developer:	Sega
Release:	TBA (UK)
Origin:	Japan






The designers have twisted the gore factor to the max, filling the game with decomposing zombies and other hideous, warped monstrosities







In an attempt to avoid the 'flatness' of the original *V-Cop*, AM1 has made *The House of the Dead*'s 3D environments as deep as possible







The game aims – successfully, it seems – to provide a shock around every corner

Atari Classics

During Atari's heyday the company delivered at least as many classics as its more celebrated coin-op peer, Namco. A new package is bringing them back on the PlayStation...

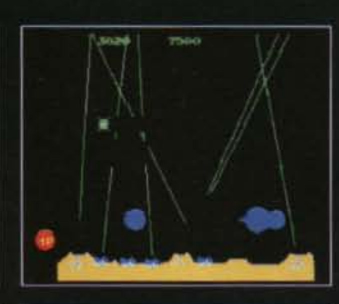
The most recent titles among this collection date from 1980, a time when Atari was at the peak of its creative and commercial powers. Sadly, though the emulations may be arcade perfect, barely half of these once-great titles are enjoyable now for more than a few minutes.

The three basic shoot 'em ups – *Asteroids*, *Tempest* and *Centipede* – stand up best, with the thrill of discovering new *Tempest* levels lifting it clearly above the others. The joypad doubles well for the original paddle controller here, and intensity of the action is as thrilling as ever. *Centipede* is similarly manic but its cluttered screen lacks the daring flash of *Tempest*. The simple points-chasing of *Asteroids*, although borrowing much from the seminal *Computer Space*, also manages to retain player interest for a while.

Of the rest, *Battlezone* is by far the worst. The PlayStation pad fails to adequately reproduce the twin-stick controls of the original and even when you do master moving the tank you'll be amazed by how little happens.

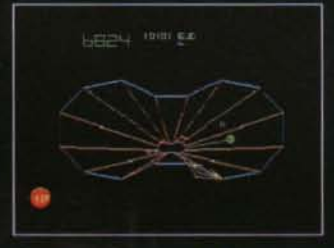
The same couldn't be said for *Missile Command*, which is an action-heavy affair, but sorely misses its trackball. Similarly, *Super Breakout*, which rounds up the collection, is a patience-sapping affair – a joypad will simply never perform as effectively as the paddle so obviously needed to play such a quick, fiddly game.

Overall, these are best looked upon as cherished memories rather than retro revivals.











Clockwise from above: *Super Breakout, Missile Command, Battlezone, Centipede, Tempest* and *Asteroids*. These Atari classics predate many of the other PlayStation back-catalogue raids and their age certainly shows



Format:	PlayStation
Publisher:	GT Interactive
Developer:	Digital Eclipse
Price:	£35
Release:	Out now













Adding value to the disc is a potted history of the six games including slideshows of arcade cabinets and ad artwork, and revealing interviews with pioneering designers such as Ed Logg (far left), creator of *Asteroids*

Phoenix

Rising from the ashes of *Space Invaders* was *Phoenix*, one of the finest examples among early shoot 'em ups and a true portent of what would follow in an action-packed genre

Taito's *Space Invaders* was followed in 1980 by its much-less lauded but far more enjoyable *Phoenix*. The game was among the first wave of multi-stage shoot 'em ups, each of its level styles offering different enemies and every fifth featuring a gigantic, not to mention revolutionary, mothership.

Phoenix even had rudimentary transitions between stages. Hardly what you'd call cut scenes, these consisted of a screen or so of vertically scrolling stars and planets and some colourful wipes and asterisk-filled iris effects.

The game's real strength was its variety. On the first two stages, two waves of fighters jiggled across the screen á la *Space Invaders*, then swept down to attack, *Galaxians* style. On the next two stages, you faced two sets of eight phoenixes which began sweeping across the screen as eggs then hatched into huge, bullet-spitting birds. Then it was on to the mothership and some serious multi-tasking: fend off the fighters while chipping away at the big shield, making a hole in the moving shield and dodging the boss's fire.

Phoenix's delightful fusion of cunning enemy attack patterns and simple-but-assured gameplay made it a game that stands the test of time far better than many other veterans.

Manufacturer:	Taito
Release:	1980





***Phoenix*'s clear and colourful graphics were a marked step forward in 1980, as was the mammoth every-fifth-level mothership (left). Arcade tacticians would shoot away the very edge of the shield, blast a good few holes in the moving barrier, then go straight for the boss alien in the middle. Considered use of your ship's shield was vital if you wanted to make it past *Phoenix*'s enemy-fighter-filled screens (right)**

(letters)

EXPRESS YOURSELF IN EDGE – WRITE TO: LETTERS, EDGE, 30 MONMOUTH STREET, BATH, BA1 2BW

Should M2 suffer for 3DO?

Does M2 have to suffer from being linked to the 3DO system? I, along with many others, have never had so much fun with any other videogaming system. It boasted many playable games, and a surprising number of titles which technically outshined their PlayStation/Saturn counterparts – like *Space Hulk*, for example. Despite a very poor spec (6 MIPS and lower-than-50% cycle rate), it had a wide range of built-in effects and an OS which attained the highest performance possible under the circumstances. *Need for Speed*, for example, was a stunning achievement.

I was in gaming heaven until the 3DO died and I couldn't get any new games. Unlike another next-gen system, it doesn't suffer from the common problem where your CD drive starts failing and the half of your games that do actually work, take twice as long. Now that's a lousy consumer image if ever there was one!

I am eagerly awaiting M2. Although I am disappointed that there will be no upgrade, I've always conceded it wasn't possible. Where would the save cords plug in? How would you run a 128bit bus over 32? Wouldn't you need to add two new joypad ports for analogue input? And, most crucially of all, how would a CD-ROM of a different type and driver load both M2 and 3DO games?

Unfortunately, it seems Matsushita has snubbed 3DO thirdparties (many were willing to develop games for M2 when 3DO owned the technology), as Virgin and Interplay have both dropped development plans. M2 certainly does have the power to hit the market like a tidal wave and I think most 3DO owners will only be too happy to consider upgrading. However, with hardly any software support, it may go the same way as the Jaguar. If I were Matsushita, I'd hold it back until October so the machine could be hyped up and a strong marketing strategy devised. But then it may be too late to get a share of the market...

D Mackness, Leicester

Compared to the formats such as the PlayStation, the M2 is certainly a less desirable proposition to developers – not necessarily because of the 3DO Mk1's reputation but because of the fog that clouds the system's future in general.

It is simply too early to tell whether or not Matsushita's machine will go the way of the dodo. It would certainly be sad if such powerful technology were to never realise its obvious potential...

Nintendo – wake up to CDs

Nintendo uses the excuse of slow access times when defending its choice to use magneto-optical disks instead of CDs, but surely this is now not the case with the arrival of 16X CD-ROM drives at around the £100 mark. It's claimed that the 64DD unit is four times faster than other consoles' CD drives (four times 300k equals 1,200K/second) – even though this is fast, 16X drives offer double that rate, so Nintendo cannot uses slow access times as an excuse for shunning CD storage. Nintendo also claims that 64DD disks are capable of storing 64Mb of data with 32Mb being writeable. What a waste. Does Nintendo think gamers are going to fill 32Mb with customised data? A 128Mbit memory card could probably handle at least ten games, so CDs could be used instead.

Steven Gilchrest, Scotland



Nintendo has been deliberately elusive when probed about its plans for 64DD (above) software, so it's difficult to say what exactly will constitute writeable data on such games

Your assertion that 128Mbit memory cards would be able to perform the same function as writeable portions of 64DD disks is certainly wrong, though: the latter's capacity is likely to be filled with complex graphical data as well as simple stats and the like.

Edge is N64-biased

Jamie McLean (Letters, **E**42) was right: however much you deny it, you think the sun shines out of Nintendo's rectum. It seems that only N64 games are worthy of getting nine-out-of-ten and above ratings.

And example is *F1* and *Destruction Derby 2* on the PlayStation: you gave them both eight. Now I think every other magazine gave them both 90% or over. Thankfully, the games' sales records recognised the fact.

The only nine-rated PS game in the last few months has been *Tomb Raider*, which I think is better than *Mario 64* – and a few people I've spoken to agree. Don't get me wrong – the N64 is a good machine, with *Turok* and *PW64* being top-notch games, but Nintendo has made a catastrophic mistake in choosing cartridges. You seem to try to cover over this fact, ignoring *Turok*'s eight levels – *Doom* has over 50. *Wipeout 2097*'s music would not be possible on cartridge, and you can't ignore the fact that the N64 is limited. *FFVII*'s sales prove the point.

Daniel Harvey, Verwood, Dorset

Edge is anti-N64

Having recently bought a PAL Nintendo 64, I have to say that it is completely amazing! Reading your feature in issue 43, though, made me slightly annoyed. Who cares if there are black borders onscreen – it doesn't affect gameplay – or even graphics – so why bother listing it as a disadvantage? Also, you seem to have got your facts wrong: the Euroconnector/ SCART cables *do* work with the UK machine – I use the cables from my UK SNES.

As a UK magazine, **Edge** should be in no way encouraging the import market. Rather it should be fully supportive of the UK games scene and review games closer to their UK release dates, not months before, when nobody but yourselves can play them.

All I would say to potential N64 owners is, don't even consider an import machine – get the UK version. This is a point which **Edge** should have fully stressed all along.

Andrew Giles, Henley-On-Thames, Oxon

Edge isn't in the business of rubbishing the PAL videogame setup for the sake of it, but certain comparitive nuances must be reported because of their obvious effects upon the consumer.

Regarding your example, the PAL system's capabilities *do* affect *Mario 64*'s gameplay – the game runs at a slightly slower pace than how it was originally intended to when it was designed. Ultimately, though, as **Edge** said at the time, it's down to the individual whether or not this aspect should be a weighty concern.

Regarding the PAL machine's connectability, last month's supplement said that, like the US model, the UK machine cannot output an RGB signal – an incontrovertible fact.

Accelerate to accumulate

Now that 3D cards are finally delivering the kind of performance that PC gamers have been crying out for since the PlayStation was first thrust into the limelight, let's hope that we don't get a repeat of what happened when CD drives hit the mainstream market – graphical quality at the expense of gameplay.

Although initial signs are good, (3Dfx *Tomb Raider*, OpenGL *Quake*) I can't help but think that game designers and programmers are once again going to get sidetracked and start churning out mouthwatering visuals along with all the playability of a dry roasted peanut.

As I'm writing this, it's just hit me that the previous two games mentioned were there before the hardware, which means that the best examples of the hardware (with the possible exception of *Ultimate Race*) are just games which have been patched, and are damn fine games without the extra frills.

Let's just hope that all this new hardware doesn't go straight to the softco's desire for simply making money, and that the extra power available helps to further enhance games designers' ideas, rather than to help sell poor ones.

On a different note, Gary Moran (Letters, **E**42) raised a few interesting points. I can remember being terrified at the 'beep' being produced while playing *Alien* on my Spectrum around 13 years ago (was it really that long?!). I've never been so scared of a green blob of a graphic on my screen. The T-Rex in *Tomb Raider* didn't invoke anywhere near the same reaction, so maybe games just seemed more real to us when we are younger.

Anyway, in a totally immersive VR environment, most men would probably be too engrossed in Lara Croft to take any notice of a marauding dinosaur.

Mmmmm, virtual...

Roger Isaac,
Doncaster, South Yorkshire

The first PC version of *F1* to be finished was in fact the 3Dfx-specific one but, generally speaking, developers have indeed taken the safe option to date by simply revamping existing game engines. This has been necessary in order to get examples of 3D-accelerated software onto the streets as soon as possible, though, and there is a wealth of future releases set to take full advantage of acceleration technology rather than simply treating it as a secondary consideration.

AI: the future of game design

Is it me, or is everybody missing the oneplayer deathmatch option from their copy of *Quake* or *Duke Nukem*? I can't seem to find it on mine. How much does the multiplayer option enhance shooters such as id's epic? I don't know – I've never used it. I'm confined to picking off static enemies who always seem to appear in the same place every time I play a level. I'm rarely surprised on a level I've played before by a monster I didn't know was there. The problem is that the enemies are placed by the designers in locations designed to scare you the first few times, but after you've learned where they are, you can round the corner and blow them away before they even get their customary growl out.

It gets even worse when designers include enemies that materialise out of thin air – all you can do is die and remember for next time. This isn't the way games are supposed to be played. Games that rely on people memorising the level are not worthy of the tag 'next generation'. *Quake* was a game that relies on skill, but it still falls foul of people who've played it through so many times that they can remember where the next attacks will come from.

The solution? Make the oneplayer game more like the deathmatch. Reduce the number of enemies to around ten to 15, make them a lot harder, make them a damn sight smarter and give them the power to wander the level in search of the player, without him or her having to be in visual range first. This would make it much more like a oneplayer deathmatch and would enhance the playability no end.

There would be other benefits to this approach, too. In **E**42, Cliff Bleszinski griped about the impossibility of designing a level that works for single- and multiplayer games. Well, if you designed your singleplayer game as a oneplayer deathmatch you would eliminate the need to compromise your designs. It would also improve player skill, and increase the fairness in the game. In the beginning of *Quake*, world one, level three, for example, there is an ogre trapped behind bars. In the oneplayer game, you simply stand out of range and shoot him. Hardly fair or conducive to skillful play.

This level of AI will one day be standard as computers will have to take over the role of a gamer who has signed off in the middle of a deathmatch game on the Internet. Softies: why not get the extra practice and implement convincing stalking AI routines now? And in reference to my letter in **E**34: Tom Zito – do that with FMV.

Stephen Virgo,
Shoreham, West Sussex



For most players, improved AI would enhance the oneplayer *Quake* (above) game a great deal. It is always disappointing to go from battling against intelligent, unpredictable and devious human beings to picking off virtually mindless enemies.

However, there are some players who actively enjoy memorising enemy positions. Look at the popularity of *Virtua Cop*: to attain high scores in this game it is absolutely imperative to learn enemy behaviour off by heart. Game designers should perhaps keep both markets in mind and develop a range of options accordingly.

32bit Mk2? No thanks

So, there is to be a PlayStation 2 and a Saturn 2 (**E**41). Can **Edge** give any reasons why gamers should be early adopters of either system considering that, after nine months, the price of the original consoles have dropped considerably, and that it's taken over 12 months to produce the games that should have appeared at the launch (eg *Destruction Derby 2* and *Daytona CCE*)? Will the same things occur the next time around?

Then there's the N64, which is reason enough not to be an adopter at all. Although one of the early non-Nintendo games, *Shadows of the Empire*, might not be top quality, in two years' time there's likely to be an extensive library of true 64bit titles for Nintendo's console. Why not invest in an N64 and buy the end-of-range games for the Playstation 1 or Saturn 1 at reduced prices? One thing's for sure, there won't be any disk jumping with cartridges.

Nick Rowe,
Leamington Spa, Warwickshire

Expecting the best games to coincide with a machine's launch is a new phenomenon. In the 8bit days, the finest software would often surface at least two years into a platform's existence, and consumers understood that games got better as designers learned more about the machines. Nowadays, hardware has a much shorter lifespan, so programmers are expected to develop instant and full knowledge of a machine within months of receiving a dev kit. This is often simply not practical – a point which you unwittingly register when you mention that the N64's software library will be great in two years' time.

As for price drops, this is an inevitable aspect of the hardware industry – there will always be consumers who pay more to buy a machine the moment it becomes available, just as there will always be those who wait for cheap hardware. Manufacturers capture both markets with gradual price drops.

Piracy is killing me

I have written to your publication on a previous occasion about what appears to be your pro-piracy stance, and find myself putting fingers to keys again on reading issue 42 of **Edge**. In one article you placed no anti-piracy comments following a lengthy description of copying devices for the N64, while your reply to one reader's letter leaves me stunned.

First, your article on page 10 reporting Nintendo 64 copying devices. We have known of their existence for some time now and do not blatantly pass on knowledge to customers about these devices. Up until your magazine's release we had only received one genuine phone call from a curious customer relating to these copying machines; now, in only one week, we have received dozens, all asking the same thing: if we stock the Cyclops, Doctor 64 or Cerebus, and if not where can they obtain them! Having a strong stand against piracy ourselves, we explain the legal implications and the crippling effect they have on the industry – especially small indies like myself. I find it hard to compete with Woolworth's, etc, let alone unscrupulous marketers trading in illegal CDRs and the like.

Second, in your Letters section you reply to a reader asking if NTSC games will run on a modified PlayStation and, instead of replying with the correct answer (which should have been, 'Yes, you can play NTSC US and Japanese games on a chipped UK PAL Playstation; they run full-screen and at 60Hz through an RGB SCART socket on an RGB/NTSC-compatible TV),

you replied by telling the last remaining few gamers who don't know about piracy and gold discs how they can get them to work, without condemning it.

Why do you print these articles letting people know what to ask for from unscrupulous dealers? Why not give the half page to FAST or ELSPA for free and throw these garbage stories in the bin? You are supposed to be a responsible senior magazine, so seeing this is the case please clean up these articles for all of our jobs' sakes.

Name and address withheld

The availability of piracy devices for the N64 is news, so it receives coverage, it's that simple. Expecting **Edge** to ignore developments such as these is essentially censorship.

Edge is not in the business of patronising its readers. News should be objective and impartial, letting readers know what is happening and letting them make up their own minds.

Edge is comprehensively aware of the harm caused by piracy to both small retailers such as yourself and the companies actually responsible for producing software – and is wholeheartedly against the practice – but hopes that its readership is intelligent enough to understand this without crass signposting.

Missing Mario's point

I think you completely missed the point with your analysis of *Mario Kart 64*.

Mario Kart has always been about competing with seven other drivers. Most other driving games bore me, with little interaction with other drivers and repetitive gameplay – half the time it feels like you're racing alone. *Mario Kart* cheats on purpose so that races are always interesting. The fact that you have to fight to keep your position makes the game all the more exciting. What I'm trying to say is that you're not supposed to take it so seriously. The point isn't to come first every race, it's to have *fun*. If you want to memorise course layouts and worry about driving the perfect race then play *Ridge Racer*. If you want variety, lots of laughs and good old-fashioned fun, play *Mario Kart 64*. I've been playing the game for a long time now and think it will be an even bigger classic than the original; it's just going to take a little bit longer for everyone to realise.

My advice to **Edge** is to lighten up and enjoy the experience.

Tekin Suleyman,
Forest Hill, London

What is the point of playing a racing game if the ultimate goal is not to win?

The reviewing process in *Mario Kart 64*'s case instigated more conference among **Edge** staff than just about every game in the magazine's history. Ultimately it was decided that it's a title worth buying – whether the CPU cheats or whether it's as good a game as the original or not, or whatever – hence the eight-out-of-ten review score.

(Q and A)

SEND Qs TO: Q&A, EDGE, 30 MONMOUTH STREET, BATH, BA1 2BW

Q 1. I have a dodgy mate who bootlegs music CDs, and he reckons he could make backup copies of PlayStation/Saturn game CDs. What with scratching of game CDs being a very real problem, I was wondering what the Sony/Sega standpoint was. Their warranties do not cover damaged discs, so surely it can't be illegal to make backup copies of games you already own. This would help out all the people who have to spend £50 to buy a game twice because the first copy got scratched.

2. Did I hear rumours that the Saturn development kit would use a version of BASIC in its coding?

R Walledge,
via e-mail

A 1. Your intentions sound quite reasonable, but Sony is quite specific about its policy in this area, delivering the message 'the unathorised reproduction... [is] likely to constitute a criminal offence' during the intros to all PlayStation games.

2. **Edge** has not heard any more information about Sega's proposed BASIC programming kit, and it's beginning to look like it was merely an idea on paper that has been scrapped.

Q 1. Do you know if N64 carts will be able to have special chips in like the Super FX chip seen in SNES carts and, if so, what do you think they will do?

2. When do you think the 64DD will be released in Britain (that is if it is going to be released)?

3. How many games do you know of that are in development for the 64DD?

4. I've heard that the 64DD disks will hold more than 64Mb in the future – do you know if this is true and, if so, how will they manage to increase the size?

DaC,
via email

A 1. In theory, yes, N64 carts could be engineered to contain extra coprocessors, but no company has plans to include such features. The situation doesn't look likely to change in the future, either, with developers concentrating on maximising the potential of the base unit.

2. The unit is pencilled in to debut in Japan in November, but an autumn '98 release for the UK seems most likely.

3. The 64DD lineup currently runs to around ten titles.

4. No, the disks will be one standard size only.

Q I would be very grateful if you could tell me what the average price of Nintendo 64 games is in America and whether or not US joypads will work on a Japanese machine, as one of my friends is travelling to the States this year.

Gareth Stevenson,
via e-mail

A N64 games retail at the $60-70 mark in the US and, yes, US joypads work with the Japanese machine.

Q 1. When will the PlayStation's analogue stick be released?

2. Which games will use it?

Adam Kitching,
Gainsborough



A 1. The analogue joystick (above) should be in stock at larger retailers right now, while the analogue controller (the joypad version) will become available towards the end of the year.

2. In terms of games currently on the shelves, **Edge** is only aware of *Descent* being compatible. The hardware has been shipped to many developers, however – so it shouldn't be too long before more compatible games are released (Namco's *Ace Combat 2*, for example, due for release at the end of May in Japan, will make use of the unit).

Q 1. Do all PAL PlayStation games have black borders?

2. Can NTSC consoles cause damage to PAL televisions?

Leon Moran,
Colchester, Essex

1. Yes, but the size varies depending on the game – those developed in the UK are more likely to have smaller borders.

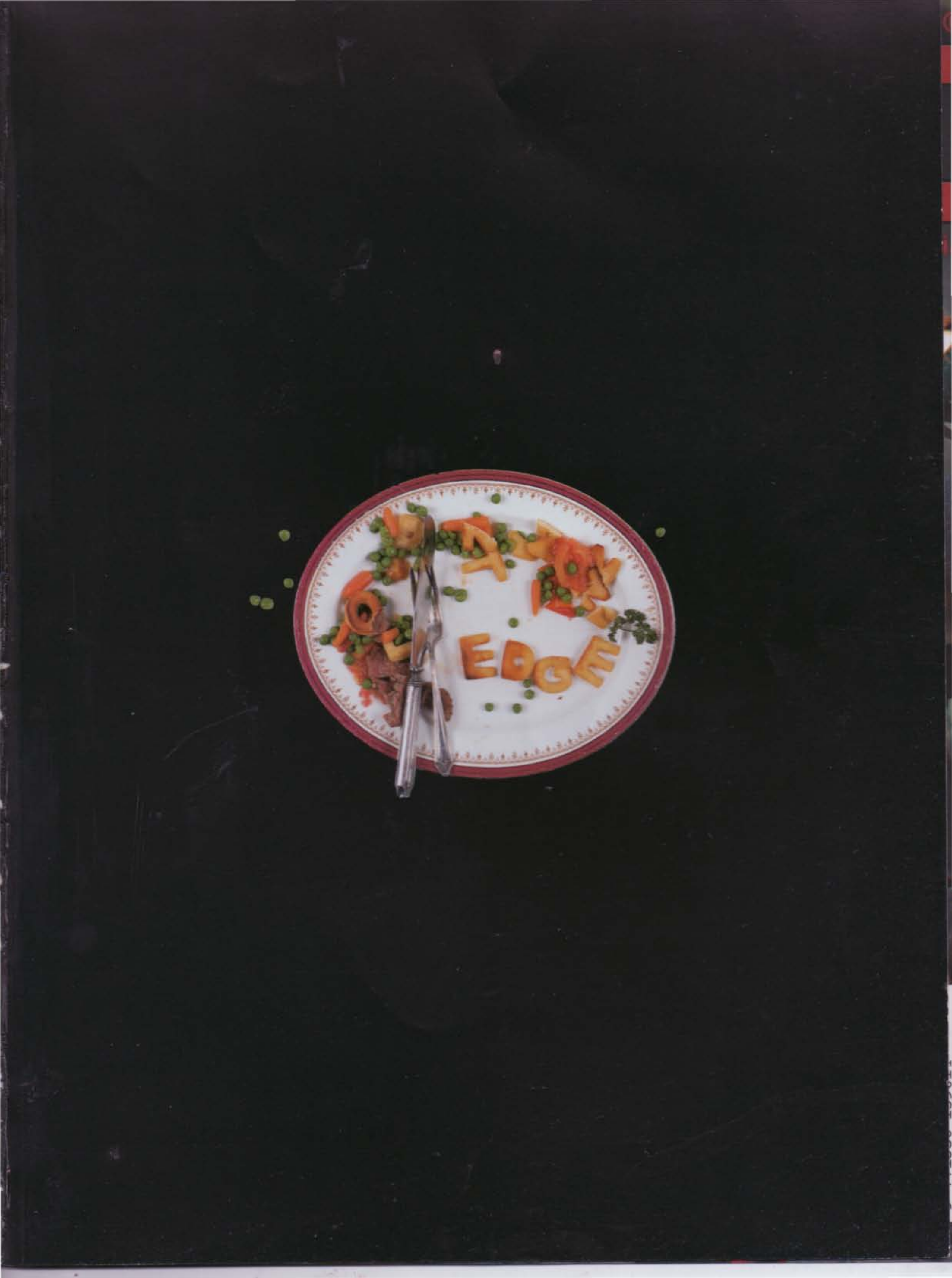
2. No, none whatsoever.

Q When will there be a convertor for the PAL N64 which allows you to play imported games?

Christian Baker,
Guildford, Surrey

A Datel, a company which would normally be expected to develop such a product, has recently told **Edge** that it has no plans, chiefly because of the small installed PAL userbase at present. Fire International is working a convertor, however, which will be available in mid-April at between £30-40.


Ocean, a member of Nintendo's infamous Dream Team, is currently putting the finishing touches to Mission: Impossible, a visually uncompromising N64 adaptation of the Tom Cruise film that could prove to be one of the most important secondparty products to date. Next month, Edge travels to Ocean's US development headquarters to meet the team behind the title.
Game emulators also come under the spotlight in the first helping of a two-part feature detailing every aspect of the scene. Those looking to recapture the glory days of the Atari VCS, CBS Colecovision, ZX Spectrum, Commodore 64 or even MSX will find it an invaluable resource...
issue forty-five
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EDGE

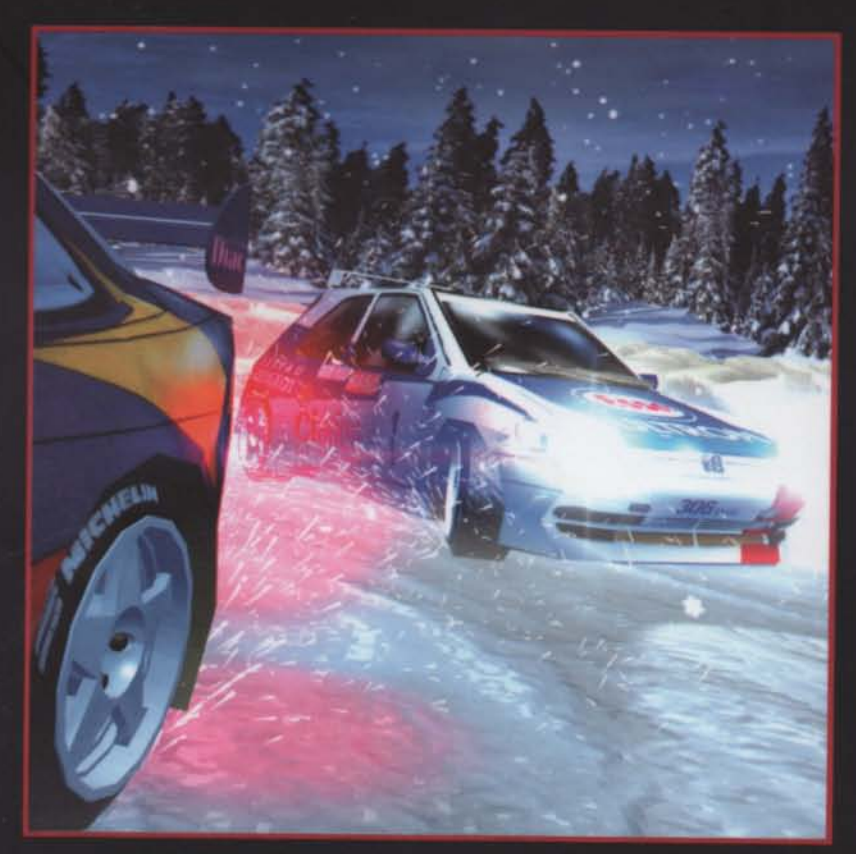


Image from forthcoming PlayStation racing game, *V-Rally*, by Infogrames (see page 50)



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